Index to Contents, February 1945

(The Annual Index to Contents appears at the back of the December issue each year)

Airports and Aviation
Tennessee Prepares to Take Wings 13
Airport Development Resolution 13
Modern Terminals and Facilities 62
Establishing Community Airports 69

Billboards
Westbrook, Conn., Billboard Case 107

Building Codes
Massachusetts Building Code 15

Business Machines and Systems
Collecting Taxes Through Punched Holes 91

City Manager Plan
City Manager Appointments 99

Conferences and Conventions
AWWA Conventions Cancelled 9
Conventions—When and Where 119
"Conventions in Print" 119

Education and Publicity
Institute of Government Aid to Local Officials 71
Community Planning Literature 83
Public Discussion Series, Cincinnati ... 85

Finance and Taxation
McMinnville Sewage Tax 11
San Diego Completes Sewer 11
Municipal Costs 79
Collecting Taxes Through Punched Holes 91
Municipal Bond Market 99
Public Works Planning, Michigan 99

Fire Prevention and Control
Protection of Works of Art 15
Safer Big Tops 15
Testing Pumping Engines 15

Government and Administration
Surplus Property 5
Municipal Employee Unions 70
Institute of Government Aid to Local Officials 71
Municipal Costs 79
Mayor Lapham's Calendar 85

Heating
Central Heating, Virginia, Minn. 80

Housing
Where We Stand in Housing 70
"Preferred Risk" Communities 87
Supreme Court on Housing 93

Interracial Relations
Reporting the Negro Problem 78

Labor Problems
Municipal Employee Unions 70

Laws and Legal Decisions
Supreme Court on Housing 93
Westbrook, Conn., Billboard Case 107
Zoning and Planning Notes 107
Municipal Law Notes and Devisions ... 117

Letters to the Editor
Fewer Streets, More Play Space 73
Community Planning Literature 83
Urge Effective City Planning and Zoning 83
When Veterans Come Home 83

Lighting, Outdoor
Street Lighting and Traffic Control ... 7
Main Road Lighting, England 111
Outdoor Lighting Cut to Minimum ... 111
Daytime Visibility 113
Equipment in 1925 113
Said 20 Years Ago 113
65 Years With a Brilliant Future 113

Memorials
What Type Memorial? 63

News and Illustrations
Items from Manufacturers, etc. 125

Officials and Employees
Municipal Employee Unions 70

Parking Meters
Parking Meters, Police Regulations 105

Planning and Zoning
How to Redevelop a Neighborhood ... 7
Tennessee Prepares to Take Wings ... 13
Interregional Thoroughfares 59
Establishing Community Airports 69
Coastline Improvements, Los Angeles Area 78
Community Planning Literature 83
Urge Effective City Planning and Zoning 83
Organization—Planners and Architects. 85
Public Discussion Series, Cincinnati ... 85

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"Preferred Risk" Communities 87
Cities Report Post-War Plans 95
Are Your Post-War Improvement Plans Ready? 97
Alfred Bettman Dies 99
Public Works Planning, Michigan 99
Post-War Traffic Program, Washington, D. C. 101
Westbrook, Conn., Billboard Case 107
Zoning and Planning Notes 107

Public Health
Basic Duty of Prechlorination 68
Water Supply Problems, Lawton, Okla. 74
Houston Gets Needed Water 77

Public Safety
Massachusetts Building Code 15
Protections of Works of Art 15
Safer Big Tops 15
Testing Pumping Engines 15

Public Utilities
Central Heating, Virginia, Minn. 80

Real Estate
"Preferred Risk" Communities 87

Records, Municipal
Collecting Taxes Through Punched Holes 91

Recreation
What Type Memorial? 63
Fewer Streets, More Play Space 73
Recreational Innovations at Salem ....

Red Cross
Suggested Mayor's Proclamation 109

Refuse Collection and Disposal
Refuse Schedule 17

Sewerage and Sewage Treatment
Joint Water and Sewerage Systems ... 11
McMinnville Sewage Tax 11
San Diego Completes Sewer 11
How to Maintain Motor Starters 66
Bigger and Better Post-War Sewers .. 67
Gary's Sewage Treatment Plant 76
Coastline Improvements, Los Angeles Area 78

Street Cleaning and Snow Removal
Cleaning Up After Blizzard 17
Device for Emergency Street Cleaning 17

Street Construction and Maintenance
Interregional Thoroughfares 59
Three California Cities Complete Street Projects 61
Post-War Highways, Seattle 103
Chicago Method of Lane Delineation ... 105

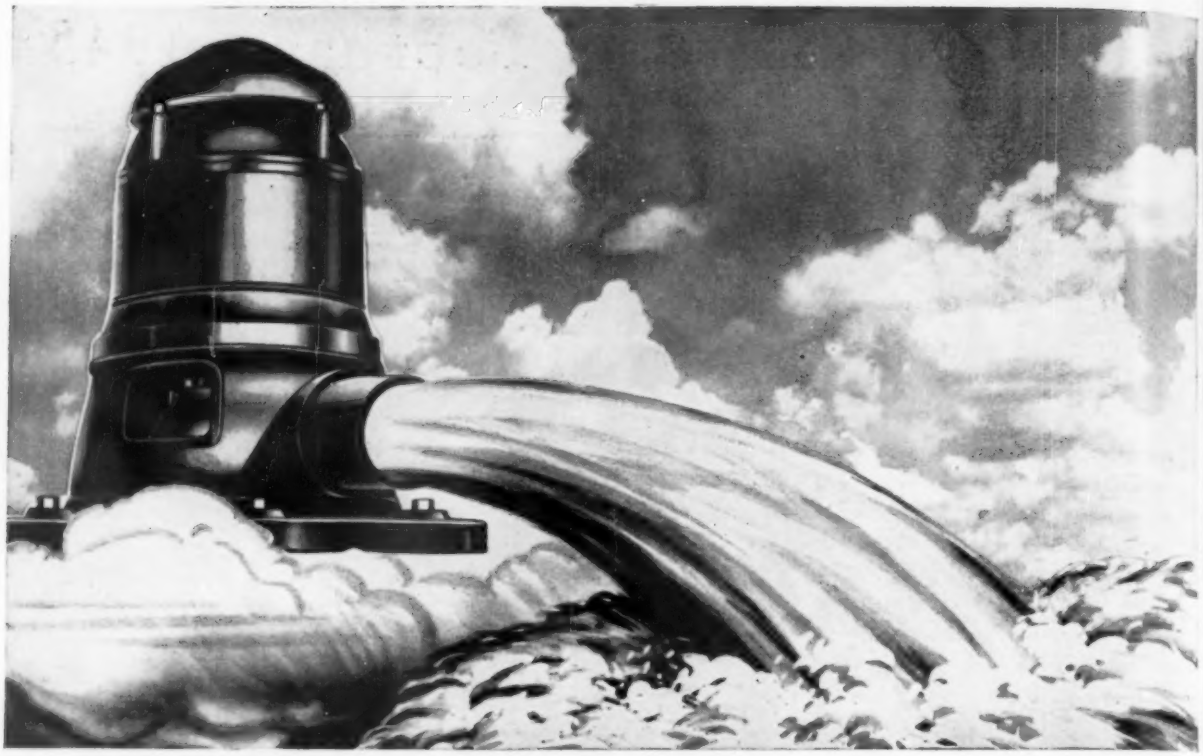
Traffic and Transportation
Street Lighting and Traffic Control ... 7
Interregional Thoroughfares 59
Three California Cities Complete Street Projects 61
Establishing Community Airports 69
Fewer Streets, More Play Space 73
Post-War Traffic Program, Washington, D. C. 101
Citizen Transit Planning 103
Post-War Highways, Seattle 103
Recommended Traffic Planning 103
Trolley Coaches for Brooklyn? 103
Chicago Method of Lane Delineation ... 105
Parking Meters, Police Regulations 105
Renamed Traffic Bureau 105

Water Supply and Purification
AWWA Conventions Cancelled 9
Maintenance Vital to War Effort 9
Trends Affecting Filtration 9
Joint Water and Sewerage Systems 11
How to Maintain Motor Starters 66
Basic Duty of Prechlorination 68
Water Supply Problems, Lawton, Okla. 74
Houston Gets Needed Water 77
Wartime Water Rates 115

Veterans' Service Agencies
When Veterans Come Home 83

See pp. 19, 20, 22, 24, 121, 123 for catalogs and publications on municipal and civic subjects

For Index to Advertisements see page 154



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FOR CITIES, INDUSTRIAL PLANTS, RAILROADS, MINES, AIR CONDITIONING, IRRIGATION PROJECTS

Surplus Property for Local Governments

By ALBERT PLEYDELL
Commissioner of Purchase, City of New York
Vice-President, National Institute of Governmental Purchasing

SURPLUS property may never be the savior of the national economy, but it can be the scourge if the Surplus Property Act of 1944 is poorly administered. To guide its administration, Mayor F. H. LaGuardia, President of the United States Conference of Mayors, presented last month to the Surplus Property Board a plan* for the disposal of surplus federal property to local governments, based on studies made by the National Institute of Governmental Purchasing.

The Act gives local governments priority over all but federal agencies in obtaining surplus property. Disposal to them shall be "on the basis of need" and "so as to afford an opportunity to fulfill, in the public interest, their legitimate needs." Surplus property appropriate for educational use or for public health protection may be sold to local governments at a nominal price, and any surplus property may be donated to them whenever "the cost of its care and handling and disposition would exceed the estimated proceeds."

These provisions require development of new administrative machinery. The Surplus Property Board must afford local governments a *fair opportunity* to acquire needed surplus property. It must *create channels for intercommunication* of surplus property information. It must *simplify disposal procedures* and *avoid the obstructive procurement laws* which bind local governments. On the other hand, local governments must assume definite responsibilities and obligations lest their acquisition priority be fashioned into a sword thrust at the national economy. They must cooperate with the federal agencies in developing new and effective administrative machinery.

Mayor LaGuardia recommends that the Surplus Property Board establish a "government division" to make necessary studies and to coordinate the activities of the several federal agencies charged with duties and responsibilities under the plan. Except for surplus vessels and surplus property aboard, disposal of personal property should be centralized in the Treasury Procurement Division and the War Food Administration.

Procedure for Municipalities

The Board should require local governments, as a condition to exercise the priorities granted by the Act, to register with the War Production Board's Office of Civilian Requirements. Each local government should designate a single liaison agency which, in behalf of all agencies of such local government, should exchange information about surplus property requirements and availability with OCR, the disposal agencies, and such other Federal agencies as have related responsibilities. Such centralized liaison agencies to each registered state, interstate agency, and city and county with a population over 50,000 should exchange information directly with the disposal agencies' nearest regional offices. The centralized liaison agencies of government subdivisions with populations under 50,000 should exchange information with the disposal agencies through the medium of OCR's nearest district office.

"Until V-E Day," the plan provides, "the Board should permit local governments to initiate requests only for their urgent current requirements. What they do not request for current requirements should be moved into normal channels of trade immediately. What they do request for current requirements should be transferred to them immediately." Local governments would be required to exercise their acquisition priority for current maintenance requirements within 28 days after notice of availability of requested surplus property.

The plan provides that OCR should (1) survey registered local governments' rehabilitation requirements and the correlative availability of large surplus property stocks, (2) make appropriate allocations among them and (3) issue corresponding "set aside" orders to disposal agencies.

Donation and Transfer Certificates

Another important recommendation is that the Board should authorize an appropriate agency to establish a surplus property disposal banking system similar to ration banking for registered local governments which would receive quarterly allotments of non-negotiable "donation certificates" and non-negotiable redeemable "transfer certificates" for sales or leases. The allotment should be in a face amount equivalent to either $2 per capita or one-half of the 1941-42 appropriation for supplies, materials, and equipment, whichever is lower. The transfer certificates should be issued only upon prepayment at such uniform discount from their face value as prescribed by the Board for the particular quarter. The local governments would establish checking accounts with member banks and would exercise their transfer or donation priorities by transmitting directly to the disposal agencies orders accompanied by "certificate checks."

Transfers and donations, it is proposed, should be made "F.O.B. trucks or railroad cars" and with full warranty.

* Available in pamphlet form on application either to the United States Conference of Mayors or the National Institute of Governmental Purchasing, both at 730 Jackson Place, N.W., Washington 6, D. C.

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City Officials

THE NEED FOR RED CROSS SERVICES IS GREATER THAN EVER BEFORE
Help Put Your City Over the Top
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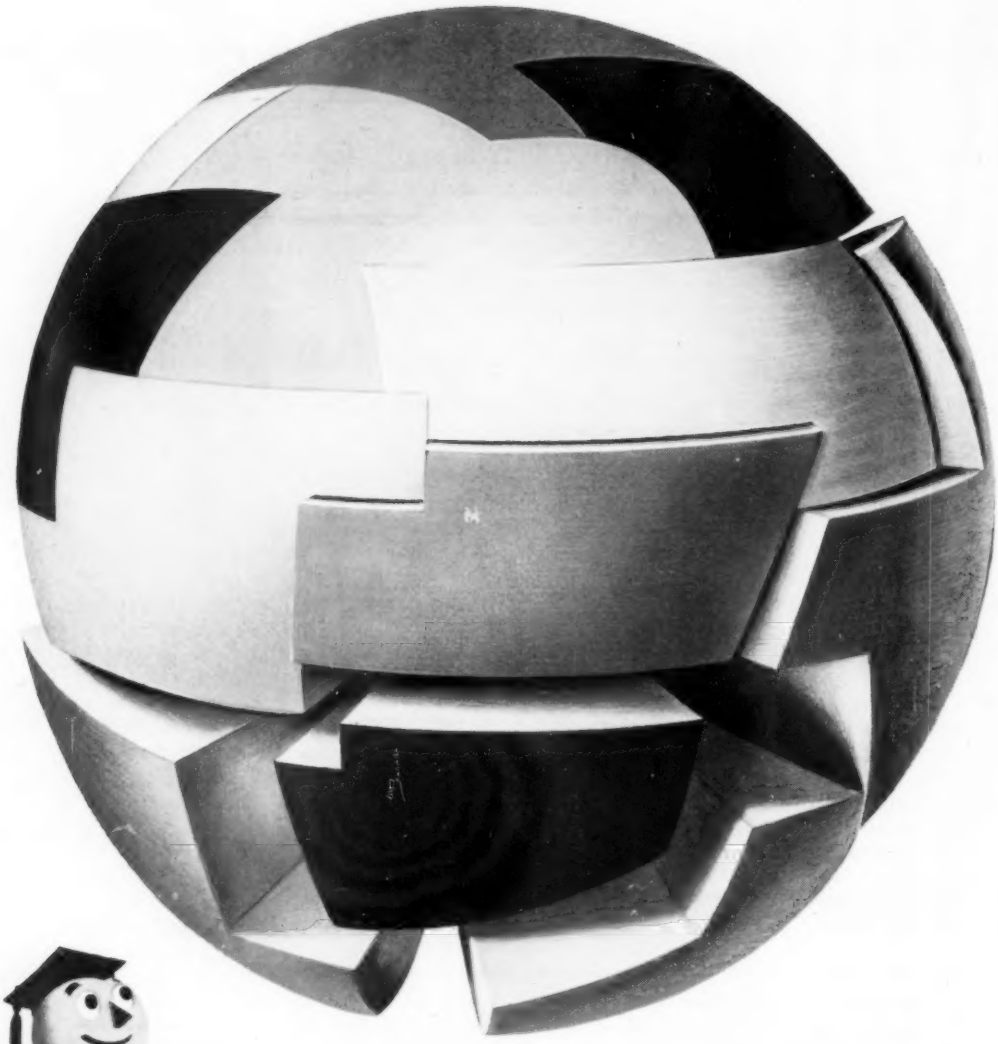
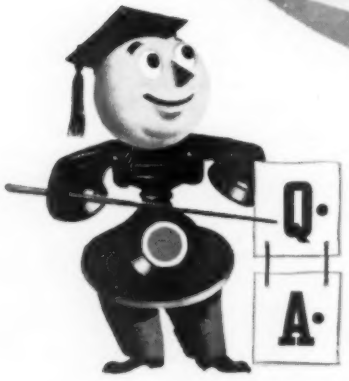
See SUGGESTED MAYOR'S PROCLAMATION on Page 109 of this issue of THE AMERICAN CITY





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The communication system which carries your voice across a continent and beyond, works because its millions of interlocking parts are engineered to fit. There are thousands of switchboards, 26 million telephone instruments and 65 million miles of circuits.

Each individual part, no matter how ingenious, is merely a unit in the whole system. The final test is—does the system work? This is the engineering ideal of Bell Telephone Laboratories. It has helped to create the greatest telephone system in the world.

BELL TELEPHONE SYSTEM

Our Municipal Notebook

How to Redevelop a Neighborhood

CITY officials, Chambers of Commerce members, and other civic-minded people who are thinking of their town after the war will find ideas and stimulation in "You and Your Neighborhood—A Primer" issued by Revere Copper and Brass Incorporated, 230 Park Avenue, New York 17, N. Y.

Like all primers, this one uses large type and as little text as possible combined with big pictures. It starts with snatches of dinner talk. "The garbage wasn't collected today. Ann almost got run over on her way to school today. David isn't home yet; he went swimming; the pool is half an hour away; I am worried." Nothing good is said about the town.

City planning must start with the people because it deals with houses and neighborhoods. To become conscious of the need for better conditions, families must realize that their home is more than a parcel of real estate in a block and that they are citizens rather than residents.

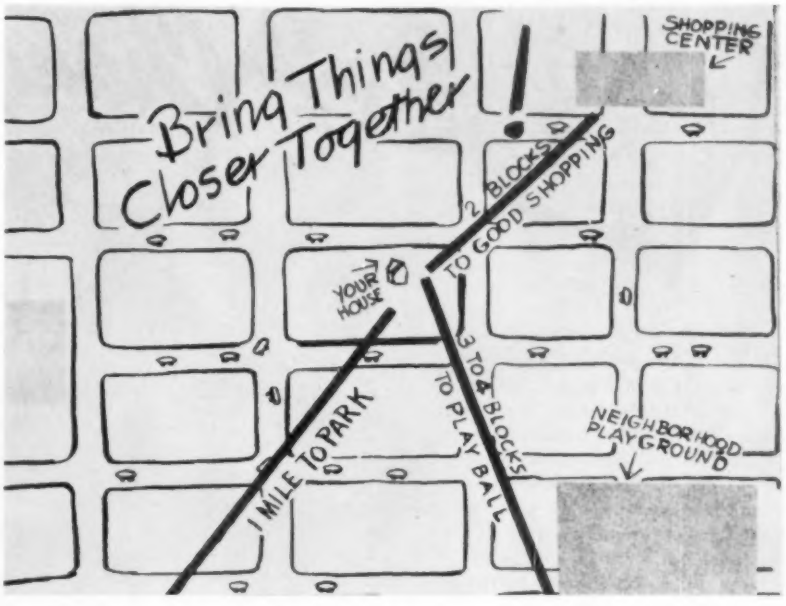
The modern community development idea envisages neighborhoods of families grouped around an elementary school and with other community facilities within the neighborhood. A large park five miles away is little good to the neighborhood, neither is a baseball field 20 blocks away nor a shopping center 10 blocks away. Streets should serve the homes, not the through traffic. Playgrounds should be planned at the rate of 100 square feet per child and be well equipped. Parks, playgrounds, a neighborhood house, and a teen-age building should be provided by the city government.

The primer urges the organization of a neighborhood planning council. This, of course, calls for someone with initiative. The leader is likely to find more interest than he had hoped among the business men's organizations, labor unions, and professional people. The councilman or city commissioner from the neighborhood might furnish the spark for such a neighborhood overhauling by taking the lead or persuading some other competent man to undertake it. In fact, done in enough neighborhoods the entire town might get itself spruced up into a complete plan.

To do a job well it must be learned, and learning starts with a primer. This Revere Primer goes on to show just what statistics the neighborhood planning council should collect and how to evaluate them. A report can then be prepared and submitted to residents of the city as well as to the City Planning Commission, or City Council.

If the planning commission is favorably impressed, it may call in a consulting firm to work with the neighborhood council and the commission. The end result is a redeveloped neighborhood with its life increased by another generation. Nearly every city will be fortunate if it gets this Primer into the hands of a public-spirited person in each of its neighborhoods.

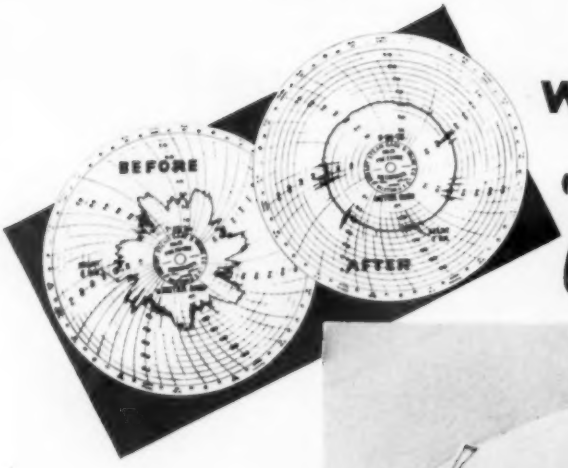
(See page 121 of this issue for further reference to "You and Your Neighborhood—a Primer.")



Neighborhood analysis shows position of your house with reference to vital facilities.

Combined Street Lighting and Traffic Control

ON the principle of making one standard serve several purposes at a given spot, Arthur A. Brainerd of the Philadelphia Electric Co. and H. V. D'Agostino of Design Today, Inc., have worked out the design shown here of a combination street-lighting and traffic-signal unit. Illumination uses low intensity brightness over a wide area getting adequate coverage without glare by using cold cathode fluorescent tubes. Maintenance and repairs should be simple in this multi-purpose unit. Says Mr. Brainerd: "This unit is designed primarily for one-way traffic or for parkways in which the two lanes have a very pronounced separation. The question of adequate coverage is a matter of detail and designing. The idea in back of the design was that it would be used where the traffic was very dense and where the conditions justified supplying enough illumination so that silhouette vision is no longer a factor. As a matter of detail I might say that in practice the unit would probably be mounted vertically, not horizontally."



WHEN A PRESSURE RECORDING "Changes its Tune"

The two charts reproduced above were recorded at Blue Island, Ill. The one at the left shows the pressure before the installation of the 1,000,000-gal. elevated tank and the one at the right shows the pressure after the tank was installed. The left hand chart shows that the pressures fluctuated from 10 to 37 lbs. per sq. in. throughout the 24 hours. The right hand chart shows how the tank held the pressure at just about 30 lbs. at all times. (The sharp movements of the recording needle were caused by local testing operations and do not apply to the system in general.) Right: The 1,000,000-gal. Horton radial-cone tank at Blue Island, Ill. It is 55 ft. to bottom and has a range in head of 25 ft.

•

Some of the advantages of the Horton *radial-cone* design for elevated water tanks are:

(1) Reduces the variation in pressure between the upper and lower water levels in the tank.

(2) Reduces the over-all height of the structure required to produce a certain minimum pressure.

(3) Reduces the average head against which pumps must operate, thus cutting operating costs.

•

THE story back of the pressure charts recorded above centers around a 1,000,000-gal. Horton radial-cone elevated tank. This tank shows how elevated storage can keep pressures uniform in a city's water supply system by providing a reserve at an elevation which will flow into the mains by gravity during periods of peak demand. Pressures drop in distribution systems at peak load periods because the rate of use exceeds the rate at which water can be supplied. When a city has adequate elevated storage, the reserve in the elevated tank or tanks simply flows back into the system to make up the difference between the peak load and the amount the pumps and mains can supply operating normally. In addition to providing more uniform pressure, Horton elevated storage reduces operating costs and provides a reserve for fire flow.

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Plants in BIRMINGHAM, CHICAGO and GREENVILLE, PENNSYLVANIA

Water Supply and Treatment

At Present No AWWA Conventions for Over 50

IN a communication of January 31, 1945, to AWWA officers, directors, section chairmen and secretaries, and all state sanitary engineers, Harry E. Jordan, Secretary of the American Water Works Association, announced that the national convention of the Association which was to have been held in St. Louis, May 7 to 11, has been indefinitely postponed.

According to R. H. Clare, Secretary, War Committee on Conventions, of ODT, Washington, the Committee is determined to cut down convention travel and hotel occupancy at the present time. Of the first 110 requests for conventions the Committee approved only two—both concerned with war-fund raising. The War Committee exempts from its ruling meetings which involve travel or hotel accommodations for not more than 50 persons.

Mr. Jordan pointed out in his letter the vital need for water works men to keep informed about such subjects as (1) keeping plants running with less labor, (2) how to continue effective maintenance, and (3) how to arrange mutual aid to bridge over the transportation delays and other crises that are imminent, and he expressed the hope that some arrangements could be worked out whereby some meetings could be held to discuss these matters and still conform to the directive.

Trends Affecting Filtration

AT a recent annual meeting of the New England Water Works Association held at Poland Spring, Maine, E. Sherman Chase, of Metcalf & Eddy, Boston, Mass., told of trends in water treatment affecting filtration, emphasizing the following points:

Filtration. In the early days of filtration the filter itself was all important but today the preparation of water for filtration and the devices and equipment required therefore are receiving equal attention. Pretreatment involves selecting and proportioning chemicals for coagulation, the use of mechanical aids for hastening the process and, in some cases, for cleaning the settling basins. Special attention is given to the design of inlets and outlets.

Where softening processes are involved new types of settling basins have been developed in which the water passes through a sludge blanket designed to accelerate the chemical actions involved. In some cases recirculation of the precipitated sludge is practiced.

Chemical Trends. Aluminum sulphate continues the standard coagulant with lime or soda ash used when low alkalinity of the raw water requires. Occasionally prechlorination is applied to facilitate coagulation and destroy taste- and odor-producing substances. With the adoption of activated carbon for taste- and odor-control, aeration has become less necessary and provision therefore has been omitted in some newer plants. Activated carbon is applied either before sedimentation or just ahead of the filters. Chlorine or chlorine ammonia is used for final disinfection.

Filter Design. Except in the case of industrial plants and for zeolite softening, pressure filters are used to a very limited extent. Most modern municipal filter plants are of the open, rapid gravity type. Underdrains vary in design with the conventional perforated pipe grid being, perhaps, the most common. Tentative standard specifications for underdrain gravel and filter sand have been prepared under A.W.W.A.

Anthrafilt as a filtering medium has been used increasingly. The use of coarser sand has come to be accepted because of the increased dependence on pretreatment and chlorination.

High rate wash is generally used but often with supplementary agitation by Baylis surface wash jets or by the Palmer mechanical rakes. Air wash is comparatively little used in modern plants. It is interesting to note that the trend in filter washing, which for several years was away from supplementary agitation, is now towards such agitation. The standard rate of filtration continues at 125 million gallons per acre per day.

Gorman Urges Maintenance as Vital to War Effort

ARTHUR E. GORMAN, Director of the Water Division of WPB, in an address before a meeting of the New York Section of the AWWA in New York recently, urged water works men to do all maintenance work necessary to keep needed equipment operating at maximum. If this is done much equipment, which might otherwise have to be replaced, will continue to operate successfully and not take materials and time that might better go into the production of vital war goods. If materials are needed to successfully accomplish this maintenance job, Mr. Gorman recommended they bring such problems to the Water Division of the Office of War Utilities which would do all in its power to help solve them.

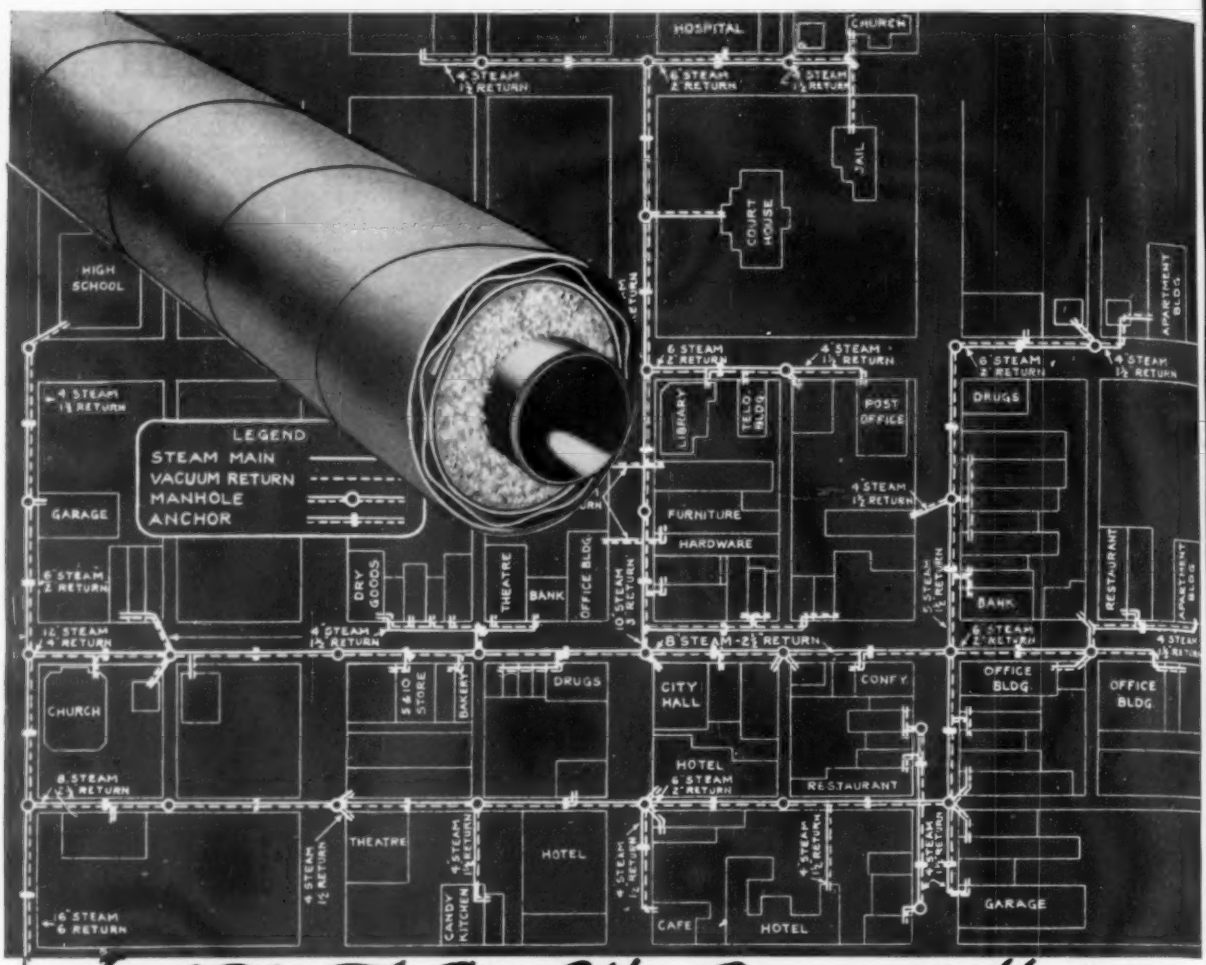
He further urged water works men to prepare to meet other and new problems or emergencies which might arise. Rainfall for the past three years has, fortunately, been good, but the unusual winter conditions experienced in many parts of the nation have already created two critical conditions and may well create others, especially during the run-off period. The two communities which have already come close to having water supply failures are Columbia, Pa., and Lima, Ohio. Both are producing vital war materials. At Lima, Ohio, inadequate stream flow, resulting from rainfall deficiencies and a freeze on the watershed which further limited run-off, created a really serious situation until a directive from the War Manpower Commission gave Lima material to install an emergency steel pipe line to bring in an auxiliary water supply from a stone quarry. A contingent of German war prisoners were used to assist in laying this pipe line. At Columbia, Pa., where the water works was flooded, it was necessary to locate and bring in portable pumps until the flooded pumps were restored to service after a three-day shutdown.

A regional and national program to meet any emergency that may arise as the war progresses is being considered.

Transportation of chemicals including chlorine has been tied up in some cases because of excessive snowfall in railroad yards. Mr. Gorman advised water works men to get in touch with the Water Division immediately if they were having difficulties getting deliveries.

The over-all picture of the war has changed since fall to such an extent that whereas then the problem of obtaining materials was easing, now many important water works materials are hard to get. The need for manpower, too, has increased until it is of major importance, and indications are that the situation will continue to become increasingly serious. Lead which is now under WPB restriction is available for caulking. Although there is a shortage of copper it is hoped that the manufacture of copper service pipe and copper meters may be continued.

The most significant point of Mr. Gorman's address brought out the vital need for intelligent and continued maintenance of equipment so that the manufacture of war materials to hasten the end of the war might go forward at the highest possible speed.



Ideal Plan For Post-War Community Heating

A CENTRAL HEATING PLANT + RIC-WIL CONDUIT

Outstanding among the advantages of community planning are the benefits gained from central heating—making it possible to purchase *heat* as a commodity like gas, electricity or city water. Ric-wiL Prefabricated Insulated Pipe Conduit provides the most easily installed, dependable, economical and efficient system of heat distribution—proven by more than a thousand miles of all types now in service.

ADVANTAGES OF CENTRAL HEATING WITH RIC-WIL PREFABRICATED CONDUIT

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- Prefabrication minimizes field work.
- Conduit is accommodated in narrow, shallow trench.
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SERVICE ADVANTAGES:

- Savings of 15% or better in overall fuel consumption.
- Elimination of furnace or boiler tending by consumer.
- Promotes cleanliness in buildings heated.
- Provides extra room in building basements.
- Decreases fire and explosion hazard.
- Reduces smoke and soot, provides cleaner, healthier community.
- Eliminates private coal delivery and ash removal.
- Gives uniform, clean heat quickly, whenever needed.

Write for detailed information on Ric-wiL Conduit for central heat distribution.

RIC-WIL INSULATED PIPE CONDUIT SYSTEMS
THE RIC-WIL COMPANY · CLEVELAND, OHIO
AGENTS IN PRINCIPAL CITIES

Sewerage and Sewage Treatment

Should Water and Sewerage Systems Be Managed Jointly?

WOULD a municipality benefit if it should put its water and sewerage systems under joint management rather than separating them as is customary?

According to J. M. Pray, Manager of Utilities at Fort Dodge, Iowa, many cities would realize a benefit, especially those with populations of less than 60,000. In a paper delivered before the annual meeting of the American Water Works Associate held in Milwaukee he stated that water works managers in cities of this class were asked their opinion of joint management and he said in every case they felt there would be a definite benefit, particularly from the economical standpoint. Several consulting engineers were also asked and all expressed themselves very much in favor of the consolidation, pointing out that municipally owned water and light plants have been operating jointly in many cities for years with success.

One Iowa superintendent in a city of 12,000 where joint management has been in force for years and where a fine job has been done states as his opinion that joint management should be confined to cities of under 25,000 to insure efficient operation.

A superintendent of water works in one of the larger Iowa cities believes that there is a definite advantage in it for cities of moderate size but could see little value for larger cities. A superintendent of another city of 15,000, who has been manager of a joint utility, states that it is a desirable arrangement saving much duplication.

"Given the proper support," Mr. Pray stated, "a good utilities man can make a success of any combination of utilities. Certainly much larger businesses are being successfully managed under one head and it is reasonable to expect similar results in municipally owned utilities."

McMinnville Sewage Tax

FOR several months we have been collecting, along with our water bill, a sewer tax running from a minimum of 35 cents up. This tax will be used to defray the expense of preliminary surveys which are being conducted for the establishment of a sewage disposal plant.

Along with other cities in the Willamette Valley, we have for the past several months, in cooperation with the Engineering Department of Oregon State College, been collecting for analysis samples of sewage from different outlets in our city, from which necessary data for the design of the sewage disposal plant is being prepared.

M. H. McGUIRE
Manager
Water and Light Department
McMinnville, Ore.

San Diego Completes New Sewer Lines

WITH an increased number of buildings constructed a the United States Naval Hospital and a tremendous increase in population that completely filled all available housing units in San Diego, the 12-inch diameter sewer trunk line became so overloaded that it overflowed. When this occurred, it became necessary to remedy the situation immediately.

Application was made to the Federal Works Agency for Lanham Act funds and the application was approved. Shortly thereafter contracts were let for the laying of 477 lineal feet of 18-inch vitrified clay pipe and 6,572 lineal feet of 24-inch vitrified clap pipe. The FWA furnished $41,250 and the city of San Diego supplied $33,000. The work was undertaken early in the fall of 1944 and is now complete.

After this project was begun it became apparent that other extensions would be necessary and a contract to further extend this trunk sewer was let for $56,945. This entailed the construction of an additional 8,315 lineal feet of 18-inch vitrified clay pipe. Work was completed December 15, 1944.

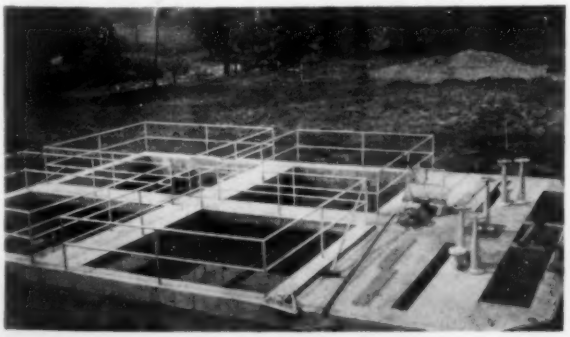
In the harbor area of San Diego a number of industries have increased in size to such an extent that the sanitary sewers in this area were not serving adequately. Further application was made to FWA for funds with which to construct this project. The FWA made available to the city Lanham Act funds totalling $74,059 and the Harbor Department supplied $34,357. The project will provide a sanitary sewer around a portion of San Diego Bay and will consist of the following lines, all of which will be of vitrified clay:

2,951	lineal feet of	8-inch	pipe
2,862	" "	12-inch	pipe
1,384	" "	15-inch	pipe
2,686	" "	21-inch	pipe
1,440	" "	24-inch	pipe

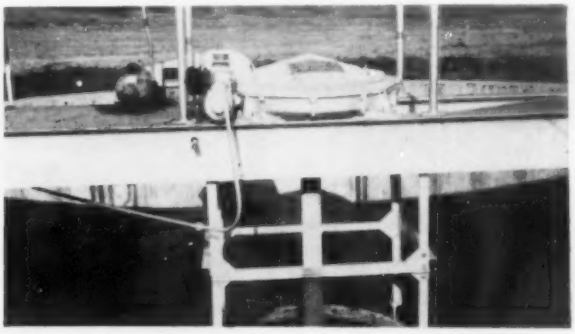
The bid of $108,417 which was taken for the work was well under the amount estimated. This project started December 5 and should be completed early in June 1945.

BYRL D. PHELPS
Assistant Port Director
Harbor Department
San Diego, Calif.

SETTLING TANK AT SEWAGE TREATMENT PLANT, ROLLA, MO.



Primary sedimentation is accomplished in this tank which is part of the newly constructed Rolla sewage treatment plant.

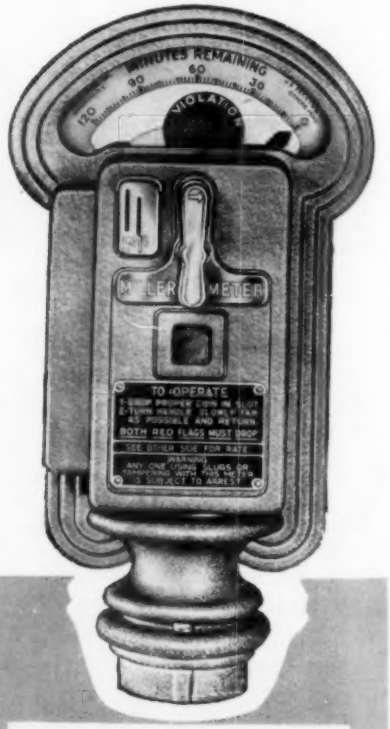


This Dorr clarifier provides final sewage settling at this plant, which was constructed with the aid of Lanham Act funds.

NICKEL PARKING
FOR THE LONG-TIME SHOPPER

PENNY PARKING
FOR THE "IN-AND-OUTER"

CAR OWNERS GET THE PARKING THEY WANT,
WHERE THEY WANT IT, AT MINIMUM COST



INSTALL MILLER METERS

and protect yourself from selecting the wrong meter!

Yes—when Miller Manuals are decided upon, there's no regretting your choice later on . . . no lingering fear that "maybe we should have selected some other type" . . . no fear that they won't hold up. For Miller Meters are **specifically designed** for trouble-free multiple coin operation.

Miller combination Penny-Nickel Manual Meter is the fairest type for everyone concerned—Merchant, Motorist, Shopper and Municipality itself. Car owners **get the parking they want, where they want it** at rock-bottom cost. The city gets maximum traffic control because a Miller installation provides maximum "turn-over" of cars in minimum time.

Even though Miller Meters are not now available the time to plan your post-war needs is now. For help in planning write us.

DUNCAN METER CORP.
1500 SO. WESTERN AVE. CHICAGO 8, ILL.

FLEXIBLE
to suit your local conditions:

12 Minutes	1c
24 Minutes	2c
36 Minutes	3c
48 Minutes	4c
60 Minutes	1 Nickel
120 Minutes	2 Nickels

Airports and Aviation

Tennessee Prepares to Take Wings After War

ACCORDING to Herbert T. Fox, Director of the Tennessee Bureau of Aeronautics, in an article in a recent issue of the *Tennessee Planner*, Tennessee's preparation for the air age has been made possible by a state law which authorizes the full use of funds collected in aviation gasoline taxes for the promotion of aviation within the state. This law provides that a 7-cent tax, collected on each gallon of gasoline sold for use in aircraft, be devoted to aviation purposes exclusively. One half of the tax is kept at the airport where it is collected. This money is used to provide and maintain facilities for private and commercial flyers. Tennessee cities, Mr. Fox states, hold an enviable position in comparison with other cities, for every municipal airport in the state is not only self-sustaining, but self-liquidating.

The remaining 3½ cents tax money is put into a fund for the promotion of aviation. This fund is administered by the Tennessee Commission of Aeronautics, a board appointed by Governor Prentice Cooper and composed of public - spirited citizens who serve their state without pay.

W. Percy McDonald, Memphis lawyer, is Chairman of the Commission; other members are John Lovell of Chattanooga, Charles Ragland of Nashville, and Judge C. W. Phillips, Commissioner of the Tennessee Department of Highways and Public Works.

Before the war Tennessee had 37 airports. Now it has 43. Most of the fields built or improved during the war are large ones suitable for commercial operations. The Bureau realizes that its first need in aviation after the war will be for smaller fields for private use. Plans have been made to fill this need and work has already been undertaken in the form of construction of a small airport or airpark, in Nashville. (*See illustration below.*) The Commission, according to Mr. Fox, expects this to be the pattern for hundreds of others throughout the state.

Airport Development Should Continue on Federal-City Basis

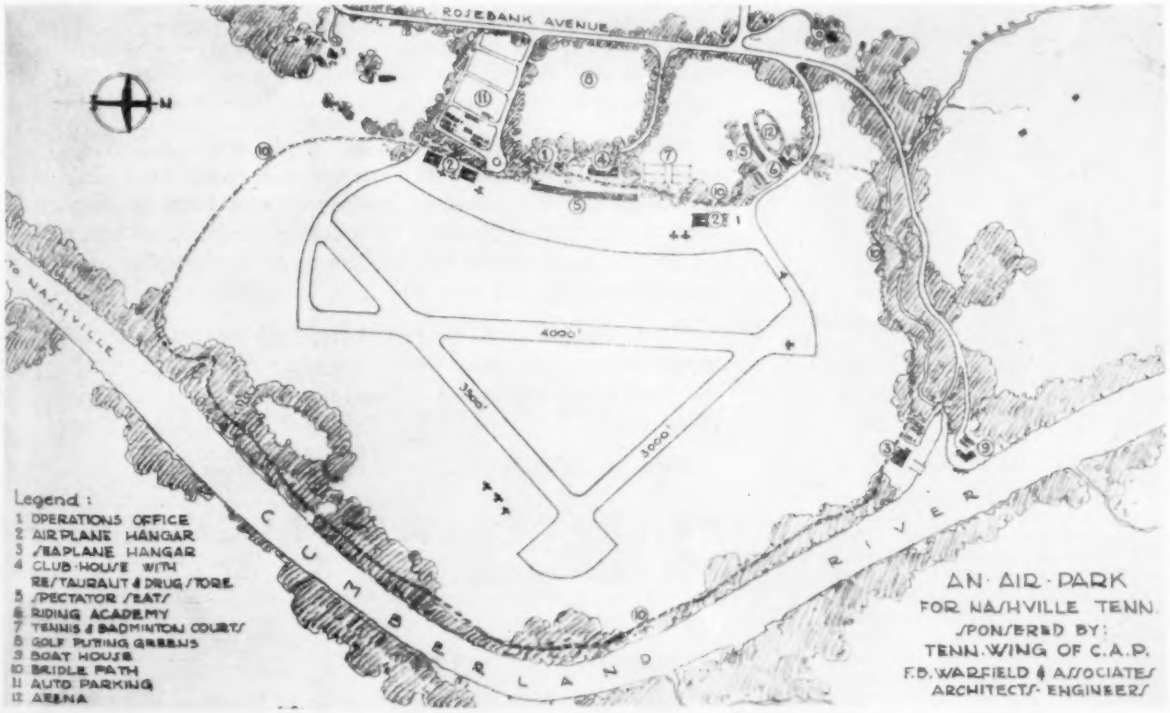
The following resolution was adopted at the recent meeting in Cleveland, Ohio, of the National Institute of Municipal Law Officers:

WHEREAS, A direct federal-city relationship developed in the airport field has produced for this Nation the best system of civil airports in the world;

WHEREAS, A change from a federal-city relationship to an exclusive federal-state relationship in the airport development field would not only disrupt this successful experience of the past but would also require such widespread changes in federal, state and local laws that the CAA's proposed National Airport Plan could not be put into effect for several years while such changes were being effected; and,

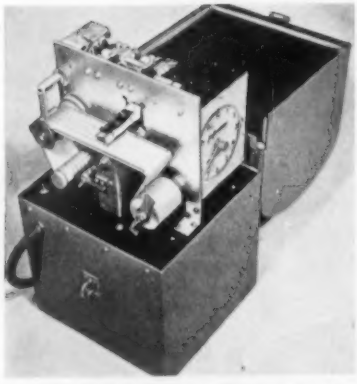
WHEREAS, Under existing federal, state and local laws the entire National Airport Plan could be carried out at once upon adoption of a Federal Appropriation Act authorizing federal expenditures on the National Airport Plan;

NOW THEREFORE BE IT RESOLVED, That the attorneys for member cities of the National Institute of Municipal Law Officers do hereby record their opinion that the CAA's National Airport Plan can best be carried out by the continued use of the successful federal-city relationship authorized by existing law.



The construction of the airport illustrated above and now under way at Nashville is concrete proof that Tennessee intends to be ready for the expansion of civilian aviation after the war.

Traffic Problems SOLVED with Traficounter in Detroit



A PRECISION RECORDER

The Streeter-Amet Traficounter is a precision instrument . . . a "lightning fast," automatic counter of motor traffic. It consists essentially of a pneumatic detector connected with an electric counter which automatically records the Vehicles running over the detector.

The Traficounter is twice as fast as any other vehicle counter. It records the over-lapping cars as they cross the detector.

The Traficounter is rugged, durable dependable . . . in use in scores of city and state traffic departments.

"The Detroit Traffic Engineering Bureau uses a battery of 12 counters on a daily schedule," says the City Traffic Engineer.

"These counters are proving extremely useful in obtaining traffic counts at carefully selected locations on a regular schedule so as to determine monthly trends in traffic volumes. Traficounters are also used to determine the need for parking prohibitions and the hours when such need exists and to determine traffic volumes related to establishment of one way streets or through streets.

"Traficounters have proven themselves extremely valuable as a man-power saver. They permit 24 hour continuous counts without the need of an attendant. Detroit recently added 10 Traficounters to its supply."

Write for Bulletin on Streeter-Amet Traficounters.

STREETER-AMET COMPANY
1732 BELLE PLAINE AVENUE • CHICAGO 13, ILLINOIS

Traficounter

Public Safety

How Often Are Your Pump Engines Tested?

EVERY fire department should check up periodically every part of every pumping engine. Many of the older makes do not have sufficient water cooling of spark plugs, with the result that they crack or cause pre-ignition. In some apparatus sufficient heat insulation of gasoline lines is not provided, or it has become misplaced. The older carburetors are not suitable for present gasoline; and often are not sufficiently flexible to permit road work and pumping with the same adjustment.

One of the more common troubles of pumps is the failure to keep all piping and packing so tight that it does not leak air when drawing water. This is especially important with centrifugal pumps. Every three months a connection should be made to a hydrant, preferably through one of the discharge outlets, and city water pressure applied to the pump and connections. Water leaks must be eliminated, otherwise there will be trouble in getting and holding suction.

The testing of all pumpers to determine if they can operate at their capacities should be carried out under the supervision of one throughly conversant with pumps and gasoline motors. Actual operation of the pumper should be by the assigned pump operator. The method of testing pumpers is given in a free pamphlet entitled "Fire Engine Tests and Fire Stream Tables" by the National Board of Fire Underwriters, 85 John Street, New York 7, N. Y. The equipment necessary for such tests is simple and not expensive Every fire department should have one set, consisting of pitot tube, revolution counter and gages, but if these are not available, a fairly satisfactory test can be run by noting the engine pressure and figuring the discharge from the tables in this booklet for the size of nozzle and length of line used.

It is, of course, essential that the motor and the mechanical parts of all other fire apparatus, especially aerials, receive the same general check up.

GEORGE W. BOOTH
Chief Engineer
National Board of Fire Underwriters

A recent case in which I tempered Justice just a bit
Involved a male pedestrian who'd just missed getting hit.
The policeman found him on his knees
Defendant said, "Well, Judge, I dropped a Lucky I'd just lit!"
Traffic Education Unit, Los Angeles Dept.

PHOTOGRAPH, COURTESY MACK MFG. CO., NEW YORK

A 1,500-gallon pumping engine of the Coronado, Calif., fire department

Massachusetts Building Code

OVER two-thirds of the towns of Massachusetts have no building codes. Legislators are now working on a statewide plan incorporating building regulations and revisions for family dwellings and industrial buildings. Plans now call for the authorization of the Commissioner of Public Safety to establish such rules as are needed, he to be given powers of enforcement with all municipalities appointing and maintaining inspectors. Says the Commission: "Because a building code is 'a work for technicians' and should be a live, flexible set of regulations subject to frequent change, administrative officials should draft a minimum statewide code and revise it from time to time."

Safer Big Tops

THE circus fire in Hartford, Connecticut, where 163 persons lost their lives last summer, has resulted in a request from the Building Officials Conference of America that the American Standards Association, New York, develop standards for circus tents that will help prevent such fires in the future.

The American Standards Association has undertaken the responsibility, and its committee will develop requirements including protection against: (1) fire, storm, collapse, and panic hazards in grandstands, tents, and other places of outdoor assembly, and in temporary and portable indoor stands; (2) methods of erection of temporary and portable stands, as well as design, construction, and methods of erection of tents; (3) means of egress, fire protection, and fire fighting equipment, as well as sanitary arrangements.

(See "Circus Fire Regulations," page 121)

Protection of Works of Art

THE protection of works of art against fire presents highly specialized problems, differing considerably from the problem of protecting records. With works of art, often on exhibition, protection must depend principally upon the material being house in fireproof museum buildings and the enforcement of rigid fire precutions.

In general these same precautions must be observed in the care of such articles as watches, gems, optical goods, stamps, celluloid goods, etc., to prevent damage to them, as to the works of art, from heat, or heat and moisture combined at temperatures considerably lower than those at which printed or written records would become illegible. The preferred solution is to store such objects within vaults having a margin of resistance above that required for the location.

to do a specific job and do it well under all conditions. That's why McDonald water works goods are specified by water works engineers on important jobs the country over. The result of 88 years of constant improvement and refinement.

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Illustrated: E4713 Diamond Patent Cap Inverted Key Curb

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CONGRATULATIONS

ON BOTH YOUR FINE WORK AND FORESIGHT ON THE PAYROLL SAVINGS PLAN!

IN your wholehearted support of the Payroll Savings Plan, you are doing far more than backing the most valid system of war financing—and building a powerful dam against the onrush of dangerous inflationary dollars.

By encouraging the all-out participation of your employees in this greatest of all savings plans, you are helping to create a sound economy for post war days.

With this same plan, you are assisting working America to build a mainstay against the inroads of unemployment and want—to save for homes, educational advantages and old age comforts!

You and your employees, through *mutual* cooperation in this forward-looking plan, are gaining a new and closer understanding—the cornerstone of a firmer, *mutually* profitable relationship!

National benefits, too, follow the "All Out" effort you are making! The prosperity of our United States rests on the economic stability of both management and labor. Your Payroll Savings Plan is working constructively toward the assurance of both!

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

Device for Emergency Street Cleaning

WHEN Kansas City, Mo., initiated a system of night cleaning of its down-town streets in October of this year the problem of how best to handle emergency calls arose. Charles S. Gish, Superintendent of Street Cleaning, and John F. Elm, Superintendent of Motor Equipment, put their heads together and decided that a light mobile unit suitable for patrolling this area would best fill their need.

The brain child which finally emerged is an extremely efficient motored tricycle which was the result of a good bit of search, research, and ingenuity since only equipment already owned by the city was used in its fabrication.

Here is how the motor tricycle cleaning unit was born. With some detective work on the part of John Elm, an old Harley-Davidson discarded by the Police Department came to light. Under the direction of Mr. Elm the street cleaning device began to take shape. First the motor was overhauled, then the side-car removed, an old street cleaning can was mounted in its place, and on either side of the can two hinged devices were attached, one to hold a broom and the other a shovel.

When the motorcycle was completely revamped an operator was put in charge of it. His duty is to patrol the down-town district contacting City Hall at frequent intervals for any emergency calls. This method of street cleaning has proved very successful, particularly where accidents have left glass or other impediments to traffic.

Standards for street cleaning suggested by the Street Cleaning Committee of APWA are briefly: *Down-town streets:* 2 to 6 times daily; *Residential streets:* once a day to once a week; *Alleys:* 3 times weekly to twice monthly; *Industrial sections:* 3 times weekly.

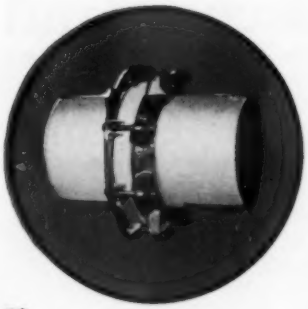
This novel homemade street cleaning tricycle was fabricated at the repair shop of the Kansas City, Mo. Board of Public Works under the direction of John Elm who is astride the device.

Cleaning Up After Blizzard

Halifax, Nova Scotia, uses a Model T4 Traxcavator on a "Caterpillar" D4 tractor to remove hard-packed snow from between car tracks and the curbs into trucks after "the worst blizzard in 20 years."

Refuse Collection Schedule

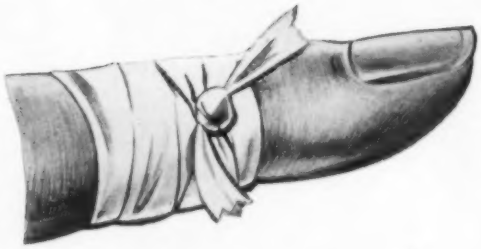
On December 1, 1944, Monroe, Mich., instituted a new refuse collection schedule by advertising it in the local newspaper. A greatly reduced reproduction of a chart of this schedule is shown above. Arthur J. Jennings, City Director, reports that this method was very successful, whereas sending out written notices, which was previously used, was not.



Style 60—for repairing bell and spigot joints: 3″ to 60″ sizes.

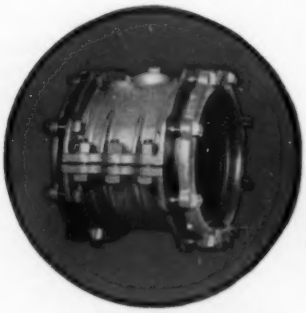
Don't forget to order

Style 82—adjustable repair sleeve, for CIP distribution lines, from 4.70″ to 9.07″ OD.



Repair Sleeves

Style 96—to permanently repair defective joints, splits or holes in steel pipe, 12″ to 24″ OD.



Style 57—for repairing breaks in straight run of cast-iron pipe, 2″ to 12″ sizes.

We needn't remind you what leaking water lines can do to road beds, railroad crossings, bridges and other public construction... but we should remind you to place orders for Dresser repair clamps and split repair sleeves as early as possible.

The repair sleeves shown above represent only a small portion of the complete line of Dresser repair products. No matter what type of leak or break occurs in your lines, Dresser has or can make the proper type of repair clamp or sleeve.

When the war is over—or earlier, if permitted—we will again be able to make prompt shipments from complete stocks. Until that time comes, let us know your requirements as far ahead of time as possible. Your orders will be entered on our production schedules immediately.

Dresser Manufacturing Division, Dresser Industries, Inc., Bradford, Pa.; Houston Office and Warehouse, 1121 Rothwell Street, Sec. 16, Houston, Texas; in Canada: Dresser Mfg. Company, Ltd., 60 Front St., West, Toronto, Ontario.

DRESSER REPAIR CLAMPS and SLEEVES

Vol. LX, No. 2 **The American City** *February, 1945*

Bringing Interregional Thoroughfares to the Hearts of the Cities

Federal-Aid Highway Act Offers Unique Opportunity for Improving Urban Traffic Conditions

By HARRY W. ALEXANDER
Harland Bartholomew and Associates, Newark, N. J.

THE enactment by Congress in December of the Federal-Aid Highway Act of 1944 establishes for the first time the principle that substantial federal funds are needed and may be made available for highway improvements within urban areas.

The act follows recommendations made by the Interregional Highway Committee in 1943. Recognizing the fact that the most serious highway problems are those existing in the metropolitan areas in and near urban communities, the report lays great emphasis on the necessity of carrying the interregional highways to the heart of the cities.* The importance of by-pass routes is recognized, but the primary need is for direct access to the business and industrial centers of our urban areas.

The reasons for the above conclusions lie in the fact that a major part of all traffic using main thoroughfares in and near the metropolitan areas of cities either originates from or is destined to some point within the central city itself. By-passable traffic constitutes only a relatively small percentage of the total traffic within the area and, in many instances, the provision of by-pass routes for this relatively small amount of traffic cannot be economically justified. As a rule, the amount of by-passable traffic decreases in proportion to the size of the city, as shown by the following:

This article, based on a paper presented January 20, 1945, before a meeting in New York of the American Institute of Planners, emphasizes the importance of prompt planning of cities for the benefits available under the Federal-Aid Highway Act of 1944, the terms of which were outlined in some detail by Lt. Col. Paul V. Betters in the January issue of THE AMERICAN CITY *(pages 5 and 125). If the local communities do not take the initiative in making their needs known to the appropriate State Highway Departments at an early date, they will find themselves at a decided disadvantage when the time comes to actually select routes for the interregional highways.*

PROPORTION OF TRAFFIC BOUND TO AND BEYOND CITIES OF VARIOUS POPULATIONS

Population group	*No. of cities*	*Traffic bound to city*	*Traffic bound beyond city*
Less than 2,500	6	49.3	50.7
2,500-10,000	6	56.7	43.3
10,000-25,000	3	78.1	21.9
25,000-50,000	5	79.0	21.0
50,000-100,000	2	83.8	16.2
100,000-300,000	2	81.6	18.4
300,000-500,000	2	92.8	7.2
500,000-1,000,000	1	95.8	4.2

(From origin and destination surveys compiled by Public Roads Administration and published in Interregional Highway Committee Report of 1943.)

Another important point made by the Committee is that the routing and general design of interregional highways through urban communities should be the mutual responsibility of the State Highway Department, the Public Roads Administration, the local planning agency and other municipal officials.

Unfortunately, highway planning in many communities has not progressed to the point where the local planning agency can be of greatest service to State Highway Departments. Those cities which have developed and are carrying out official city plans are in a position to present the local needs in a convincing manner, while those communities that have not made plans for a modernized highway system, as part of a Master Plan, may find themselves in the position of having to accept highway routings selected by agencies which are not familiar with and have no real understanding of local conditions. Even in communities where planning is being done under competent technical guidance, it is very difficult to arrive at a solution of a complicated interregional highway routing that will be entirely acceptable, both to the community and the State Highway Department.

Super-Highways *vs.* Street Widening

In recent years, there has been a change in concept of the kind of urban highways needed in the larger communities. It is now generally recognized that the greatest need is for one or more limited-access, grade-separated thoroughfares which will extend through the entire city and provide direct access to the central business section and other major traffic objectives. Within the last ten years this type of highway has been extensively developed in and near some of our largest cities, as well exemplified by the parkway systems of Westchester County and Long Island, New York, and the Chicago Outer Drive. A relatively few so-called super-highways, either of the elevated or depressed type, have also been built in some large cities, but as a general rule these highways have not penetrated into the heart of the community.

Most highway planners agree that a few strategically located highways of

*In the discussion of this paper at the meeting of the American Institute of Planners, the fact was brought out that in many instances the interregional highway ought to be so designed as not actually to penetrate within the city's most congested area, but rather to deliver the city-bound traffic to a belt highway at the edge of that area over which such traffic could most readily reach its destination.

the type described above will serve the needs of the community better than a large number of widened city streets without grade separation. While there are many difficulties involved in planning and constructing these modern highways, and their cost will be great, they offer the best ultimate solution to our urban traffic problems.

A Job for Local Planning Agencies

Local planning agencies are concerned with two phases of the proposed national system of interregional highways. The system recommended by the Interregional Committee cannot be adopted officially until appropriate action has been taken by the several State Highway Departments. The proposed system will connect all cities in the United States of over 300,000 population, as well as many having a lesser population, so it will be of concern to many communities now actively engaged in city planning.* Local planning agencies should make sure that proper recognition is given their communities in the selection of highways that will comprise the interregional system and that the general design and routing of that part of those highways passing through the city conforms to local needs and the Master Plan.

Many State Highway Departments are not urban-minded, but the next few years should produce a pronounced change of attitude. By allocating funds specifically for use in urban communities, the National Highway Act insures that a substantial part of forthcoming federal aid will be expended in communities of more than 5,000 population. If the states are to receive this aid, they must soon begin studies of urban traffic problems.

In the light of experience to date and in view of the fact that practically all cities of over 100,000 population will face complicated post-war problems of highway location, in which federal, state and local highway authorities will have mutual interests and responsibilities, it would seem advisable to determine and agree upon some kind of procedure which will insure the best results to all concerned. The following suggestions relative to such procedure are offered for discussion.

* TOTAL NUMBER OF CITIES OF EACH POPULATION CLASS CONNECTED BY RECOMMENDED SYSTEM OF INTERREGIONAL HIGHWAYS

Population	*Total Number*	*Total Connected*
1,000,000 or more	5	5
500,000-1,000,000	9	9
300,000-500,000	16	16
100,000-300,000	62	59
50,000-100,000	107	82
25,000-50,000	213	121
10,000-25,000	665	295
	1,077	587

(From report of Interregional Highway Committee, 1943.)

Cooperative Approach Urged

It is important that all interested parties be brought together at the earliest possible date to establish a cooperative approach to the particular problem at hand. Here all parties might state their views, exchange information, study traffic counts and master plans of land use, zoning, transportation, etc. If this is not done prior to the preparation of specific plans, severe handicaps are apt to be placed upon the free and untrammeled approach to study of the best solution of the problem. Those who have prepared plans in advance of such initial discussions are very apt to feel themselves on the defensive, and more or less obligated thereafter to defend their position and justify their work.

At the initial meeting, those in charge of design for both state and local agencies, and possibly for the federal agency, might be authorized to prepare initial sketch plans. If agencies of all three levels of government agree that some particular office or individual is unusually well qualified to make these initial sketch plans, there would be no objection, and this would possibly be a more expeditious procedure. Any agency which has strong views, however, should not be prevented from making sketch plans, so that its views may be freely offered and considered subsequently.

Following the preparation of sketch plans, a second meeting of all the agencies and officials concerned should take place to discuss the various ideas and possibilities, and the effects upon the urban community of these first sketch plans. This will serve to bring about a far better understanding and grasp of all aspects of the problem. No large sums of money will have been expended upon plans which have to be discarded. There may be need for two or three meetings of this character, and the preparation of several subsequent sketch plans. Gradually, if not in the first instance, there will be clarification of the issues involved, and general, if not unanimous, agreement upon the most desirable and satisfactory type of plan.

At this point it will become necessary to prepare detailed plans. A preliminary detailed plan should then be designed for submission to a final meeting of the representatives of the various governmental agencies involved. At this meeting various details of design and their effects upon local portions of the community may require some further discussion, but a large amount of time should not be required to resolve these uncertainties or differences of opinion. One further meeting may be necessary for the study of revisions and final details.

The procedure outlined above is suggested to bring about better mutual understanding and will in the long run lead to more satisfactory solutions and the most expeditious actions. While the responsibility for construction and execution of the highway projects in urban areas should rest with the state authorities, the determination of location (and perhaps to some extent the design) is so largely a matter of local concern that these determinations should be the result of joint agreement of local officials and agencies.

When Agreement Is Difficult

While a very large percentage of all cases can probably be settled satisfactorily by the procedure outlined above, it is possible that there will be a failure to reach agreement in a few cases. In this event it might be advisable to have the Public Roads Administration appoint a committee of national authorities to study and make recommendations. This committee should be composed of not more than three persons, widely known for their experience and ability. One should be a person widely experienced in highway design. One should be a competent city planner, with extensive experience in this field. The third should be a person having a wide knowledge and experience in municipal administration or municipal engineering, preferably both.

In those cities operating under the provisions of the Standard City Planning Enabling Act, or by charter amendment with similar provisions, the location (and in some cases the design) of streets, highways, parkways, bridges, viaducts, and such are subject to approval by planning commissions. The recommendations of the planning commissions can be overruled only by a three-fourths vote of the legislative body in certain states. In other states a mere majority vote is required. The suggestions offered above were made with these planning laws in mind. By bringing in the planning agencies, as well as the local officials, in the initial stages of state and federal locations in urban areas, many subsequent difficulties can be avoided.

(Concluded on page 93)

Three California Cities Complete Street Projects

By G. T. McCOY
State Highway Engineer
Sacramento, California

IN order to conserve materials necessary for the swift prosecution of the war, construction projects since the onset of hostilities have been confined to those which would further the war effort. In California, three cities have carried out major street projects to provide for an adequate flow of traffic to areas engaged in vital war work. They are:

San Diego

Here there were two major projects. One involved route U. S. 101, the other, Harbor Drive.

The unprecedented industrial and naval expansion in San Diego brought about such congestion on the existing street facilities that major improvements were necessary. These included a major reconstruction of U. S. 101 from Market Street to the San Diego River and the extension of Harbor Drive north and south along the waterfront.

The reconstruction of U. S. 101 involved widening the existing highway to six lanes, constructing three major grade separations at the most important intersections, and installing traffic-actuated signals. The total length of this improvement was 4.1 miles.

Harbor Drive was extended 4.9 miles to the south and 3.7 miles to the north. This project consisted of constructing from four to six lanes of pavement with a division strip and the construction of four major bridge structures aggregating some 2,100 feet in length.

These two improvements have been completed and in use for somewhat over a year now. The total cost was about $4,000,000. State highway engineers designed and constructed both projects.

Several other sizeable projects have also been substantially completed here. Among these are four which cost about $6,600,000 and which bring the gross total distance of street improvement to 19.3 miles in the San Diego area.

Los Angeles

Here Imperial Boulevard was reconstructed, and in and around Los Angeles other street projects were completed.

A 11½-mile section of Imperial Boulevard from Anza Avenue to Sepulveda Boulevard has been constructed as an access project to provide better traffic facilities to the Los Angeles Municipal Airport and to aircraft manufacturing industries in the general vicinity of the airport, including Douglas Aircraft Manufacturing Co., North American Aviation Co., and the Sperry Gyroscope Co. The city of Los Angeles prepared plans for this project and the State Highway Division was in charge of construction.

This project entailed the widening and resurfacing of the inadequate strip of paving which existed at that time. Los Angeles and Los Angeles County contributed 25 percent of the cost. The remainder was from Federal Access Funds—the total amounting to approximately $100,000.

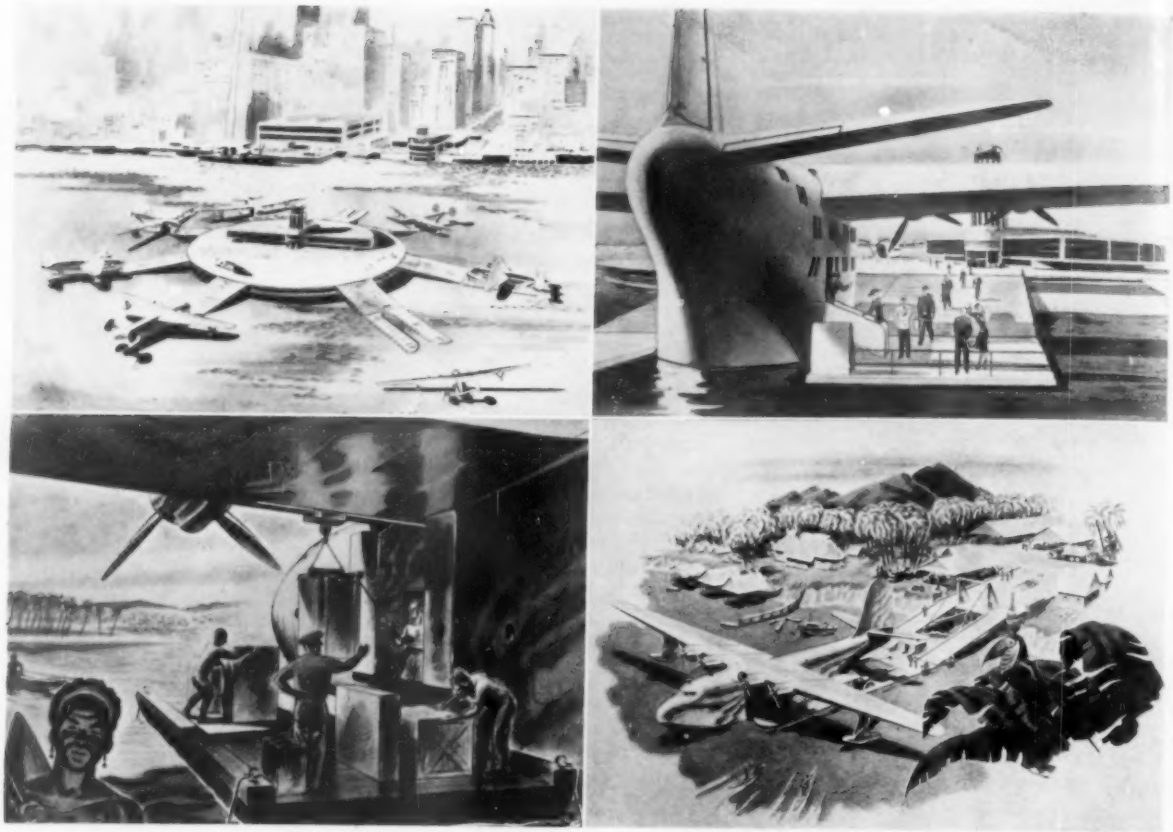
Burbank, Calif.

Here a number of access roads were constructed to supplement those streets which were overburdened with traffic leading to and from the Lockheed Aircraft Manufacturing Corp. These access-road projects in Burbank, necessitated by the abnormal traffic increases brought about by the expansion of the Lockheed plant, consisted in widening and reinforcing various city streets feeding into this area. These projects included the improvement of 4.3 miles of city streets at a cost of around $200,000. The projects are now complete and in use. Plans were prepared and the construction carried out by the engineering staff of the city of Burbank under the supervision of the Division of Highways of the California State Department of Public Works, and the United States Public Roads Administration.

Other Cities Improve Streets

There have been other cities in California that have had to improve some of their streets to meet the demands of war. A considerable number of access projects were financed by the government in San Francisco Bay cities. Among these the most notable were the access roads constructed in and around the Richmond Shipbuilding industries. Fifteen projects have been constructed here at a total cost of $2,600,000 and covering approximately 16.5 miles of roads and streets.

The plan and profile of the highway completed in San Diego, Calif. Harbor Drive was extended 4.9 miles south and 3.7 miles north. The project entailed the construction of from four to six lanes with a division strip, and four major bridge structures.



In inner harbors, the island type of seaplane terminals with tidal docks and a tunnel to the shore (upper views) are needed. The pier landing, closely related to the island type, is shown on the cover of this issue. In smaller places, airships can be unloaded by barge or at a simple dock (lower views).

Modern Terminals and Facilities for Leviathans of the Air

THAT the sketches shown above are not something out of Jules Verne is indicated by the fact that they are the product of the Glenn L. Martin Company, Baltimore 3, Md., which introduced the first transoceanic commercial aircraft, the China Clippers, a decade ago, and which manufactures the Mars Transports, largest flying ships in the world.

Flying ships, like personal craft, use the simplest facilities—for the first, a patch of water and a strip of shoreline; for the latter, a grass landing in the right location.

"The flying ship does not have to wait for the great airport building programs, however vigorously they may be pursued," says Mr. Martin. "Where concrete runways of 10,000 feet to accommodate landplanes of 200,000 pounds cost several million dollars, the seaplanes have almost limitless indestructible runways everywhere.

"But," continues Mr. Martin, "if the greater carrying capacity, the greater safety and the greater place-to-place flexibility of the flying boat is to be used to best advantage, special terminals must be built for them. The cost would, however, be but a tiny fraction of the cost of building vast airports that could conceivably handle landplanes ranging from 150,000 to 500,000 pounds. . . . In any size, the flying boat carries half its gross load in disposable load, which is not true of the landplane, where the proportionate weight of its landing gear increases with increased size.

"All but an infinitesimal proportion of the population of the world lives below the ice line," he points out, "and in even such marginal ports as New York, Pan-American Airways has been operating flying boats with almost no interruption to schedules. And when you consider that so much of the world's trade is based on seaports, the importance of the flying ship becomes obvious. Practically all the large commercial centers of Latin America are built on navigable waters."

Other leading articles on airport planning published in THE AMERICAN CITY in the last six months:

	1944	
WILL CITIES COME OF AIR AGE?—I	August,	page 51
WILL CITIES COME OF AIR AGE?—II	September,	page 78
MARKING THE AIRWAYS	September,	page 82
YOUR MUNICIPAL AIRPORT	October,	page 88
LET'S LICK THE AIR TRAFFIC PROBLEM	October,	page 93
WHY SO MANY AIRPARKS?	November,	page 7
AIRPARKS TO SUIT THE FLYER	November,	page 70
AIRPORT DESIGN	December,	page 13
MUNICIPAL FLIGHT STRIPS	December,	page 67
AIRPORTS ARE VITAL	December,	page 79
AIRPORT ZONING	December,	page 99
	1945	
LOW-DOWN ON AIRPORTS	January,	page 74

What Type Memorial?

Some questions the average community may consider when discussing and planning a memorial to its boys and girls serving in World War II

TOM from Virginia, Dick from Tennessee, Michael from California, Pat from Texas, Gerald and Mary from Maine—boys and girls from across our land—are on the firing lines. They are fighting our battle and theirs to maintain the free way to live. Every day our sense of gratitude to them grows deeper and we think of ways in which we can commemorate their unselfish services.

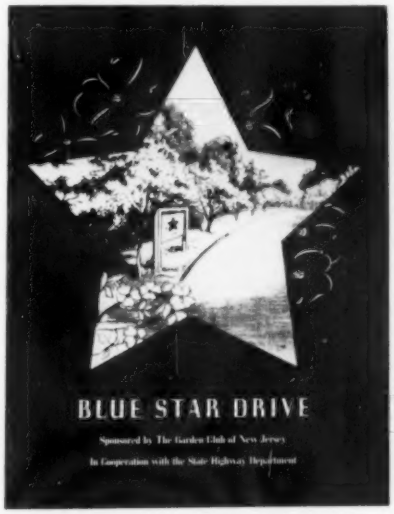
Our sentiments are deep and genuine, but for the most part we do not know how best to give them expression. What kind of memorials shall we build to commemorate their fine spirit of cooperation and their high devotion to duty? Is a personal monument enough —appreciated at most by our own generation and those knowing them—or shall we dedicate our memorials to the task of building a better local and world community, that we may not only hold the ground won by them but may together, in time, outlaw war?

Men grow in stature as they cooperate with their fellow men, and today there seems a new awareness of this as men and women across the country discuss and plan memorials where all the people in the community may work and play together, and discover new capacities within themselves. In earlier issues of THE AMERICAN CITY* we have discussed community centers and other types of memorials. Here we want to deal again with memorials in general.

Memorial Reflects Community

Any good memorial expresses the background, needs, and sentiments of the community which has built it. So don't dismiss your job with a stock monument or a memorial flag pole set up on a triangle of green on your village street. That is an easy way out, but hardly adequate. Instead, call your leading citizens together. Study the needs and opportunities of your town or city, and its resources. Make the most of what you have. If you need parks or camping facilities, there may be an unused area by a stream or in the center of a town and you may add a bandstand or pavilion for community meetings and festivals.

What of a clock tower with the name of your town clearly inscribed on it, or chimes played, as at Circleville, Ohio, on special occasions and every day at dusk? If you are in a scattered farming area have you thought of a district bookmobile, carrying books regularly from the state or regional library to areas where books are rare? A musical community might well find its greatest satisfaction in a community chorus, or a small orchestra of local players. The idea of memorial forests, so well outlined in a recent bulletin issued by the Forest Service of the United States Department of Agriculture, Washington, D. C., might prove a happy local or regional choice for some.



A quiet five-mile stretch of Route 29 is being planted by the Garden Club of New Jersey with native flowering dogwood as a memorial to the men and women of New Jersey serving in the Armed Forces.

If you are a college town, have you considered scholarships for boys and girls from other countries having similar backgrounds and interests to those of the American boys and girls in your own college?

In a small town where, as many young people often complain, "there is nothing to do," what of a recreational park with facilities for all sorts of games, and club rooms for nature study groups, and for groups who want to discover the birds, flowers, trees, and rocks in their own region? Let us bring the good life of mind and spirit to our communities and let us choose a memorial that will help us to do this.

Imagination and Originality

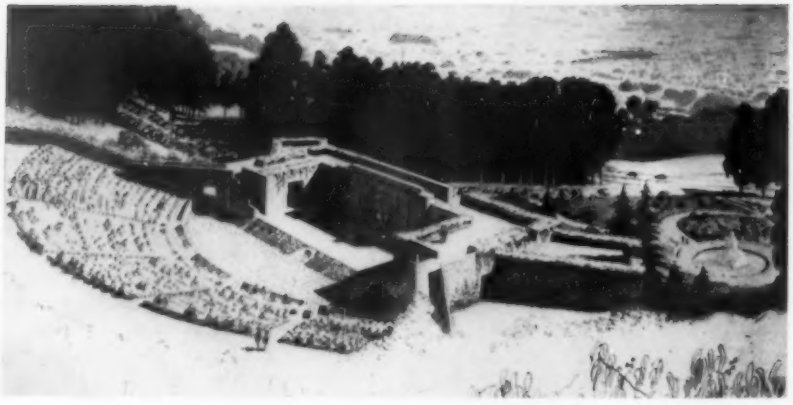
The Garden Club of New Jersey has used originality and imagination in planning the Blue Star Drive—a project for planting a quiet stretch of a four-lane highway on Route 29 between Mountainside and North Plainfield with flowering dogwood as a living tribute to all the men and women of New Jersey serving in the Armed Forces. The project is being carried out in cooperation with the State Highway Department and is an example of wise forethought in planning. The Garden Club is promoting the idea of a tree for each service man and woman, is raising funds, and aiding in planning the project. The Highway Department is selecting, planting, and will maintain every tree donated as a memorial. The continued public maintenance as well as the beauty of the drive is thus assured. The dogwood is native to New Jersey—one of its most beautiful trees —and this determined its choice. One can imagine similar memorial drives bordered with dogwood and redbud trees farther south.

Another example of creative planning is "Woodminster," an outdoor amphitheatre overlooking San Francisco Bay, near Oakland, California, built as a memorial to California writers. Already a center for festivals of music, the dance, opera, and dramatic readings, it has enriched the lives of numerous people in the San Francisco area, bringing them together in the strong ties of cultural interests. The surrounding area in Joaquin Miller Park is a recreational retreat with illuminated fountains, cascades, and gardens adjacent to the amphitheatre and, a little farther away, a picnic unit and fire circle for group picnics and meetings.

Recreational Park

A memorial plan of large proportions has recently been proposed by Ironwood, Mich., located at Michigan's Western Gateway in the heart of the snow lands. The plan calls for

* For previous articles on this subject see THE AMERICAN CITY, August 1943, *Front cover;* December 1943, p. 79; January 1944, pp. 35 and 44; February 1944, p. 65; June 1944, p. 113; October 1944, p. 72; and November 1944, p. 77.

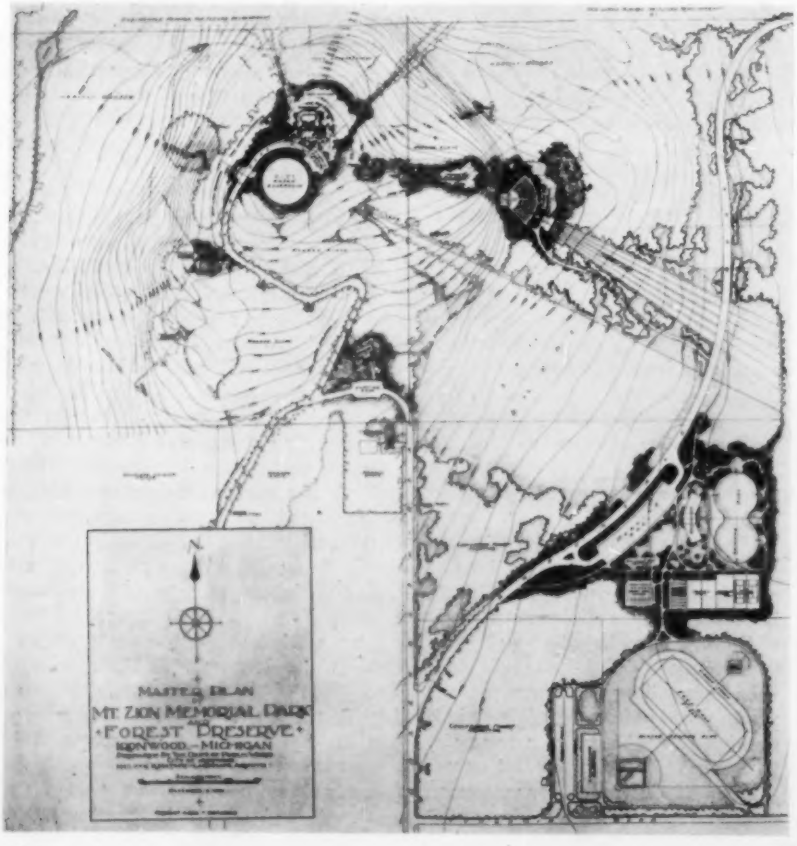


LEFT: *"Woodminster," memorial amphitheatre overlooking San Francisco Bay, has become an important factor in bringing together people of that area in the strong ties of cultural interests. Music, the dance, opera, and plays are regularly enjoyed in this outdoor setting.*

the development of Mount Zion recreational area—already extensively used for winter sports and, in summer, for picnics and sightseeing. It is proposed to extend present recreational facilities, to add a Veterans' Memorial panorama observation tower and shelter, a swimming pool, an outdoor theatre on the hill side, a toboggan slide, and to reforest denuded parts of this area.

Local Inspiration

Although not a war memorial, an inspiring idea is embodied in Woodland Park at Mineral Wells, Texas. Half of a ten-acre area is utilized as a cemetery, with graves level with the surface of the ground and designated by simple bronze markers. This section abounds in big trees, flowering shrubs, birds, and has two or three small shelters provided for devotions or meditation. Continuous with the cemetery is a park with winding roadways following the contours of the land, passing near a sunken rose garden, a quiet pool, and small open pavilions—one rising on a knoll above the wide areas of carefully tended grass and shrubs, the other standing beside a lotus pool. The whole area, park and cemetery, is a quiet retreat, extensively used as such by the public. It is in the care of a superintendent, serving directly under the Mayor and Board of Commissioners of the city. The gates are closed at dusk. A site was selected that had many fine native trees and native stone was used in all construction, while shrubs and other planting, congenial or native to the local climate, were utilized.



LEFT: *Mt. Zion Memorial Park will, if the accompanying plan materializes, become an all the year round recreational center with facilities to suit every taste.*

Monumental Memorials

When speaking of memorials, the minds of many turn naturally to such monuments as the Nelson Memorial at Trafalgar Square in London, Arc de Triomphe in Paris, the Washington and Lincoln memorials in our national capital, and such monuments from the last war as the mausoleum at Arlington Cemetery, Va., with its black granite obelisk, memorial plaza and fountain; the Potomac Park Memorial at Washington, dedicated to the men of the District of Columbia who fell in the last war; Yale University's cenotaph to students and graduates who fell in World War I, and the imposing memorials at Indianapolis and Kansas City, Mo.

These have their place, but it would hardly be possible to duplicate them throughout our land, were it desirable. In general the trend of sentiment seems to be for memorials that will be lasting in character and also useful and attractive—something which will contribute to the health, security and general well-being of our communities and will at the same time remind people of the heroic services which prompted their establishment.

Let us therefore make our memorials first a *dedication of will* to bring a good life to each one of our communities, large or small.

The Commemorative Feature

But one may fairly ask here, "How can we maintain the commemorative element in the more utilitarian memorial?" The usual series of bronze plates is not enough to achieve this. These we shall want as a matter of course, but can we find no way to bring to our communities that vitalizing inspira-

tion which has sustained so many of our men and women during this war?

A memorial at Amherst, Massachusetts, erected to Guy Levy-Despas by his fraternity brothers at Amherst College, bears this inscription taken from a letter to his mother written from Malta just before his death:

"Of course, I am young, full of ideals, in love with the life of adventure, but I believe where one's country is concerned nothing is sufficient short of the maximum."

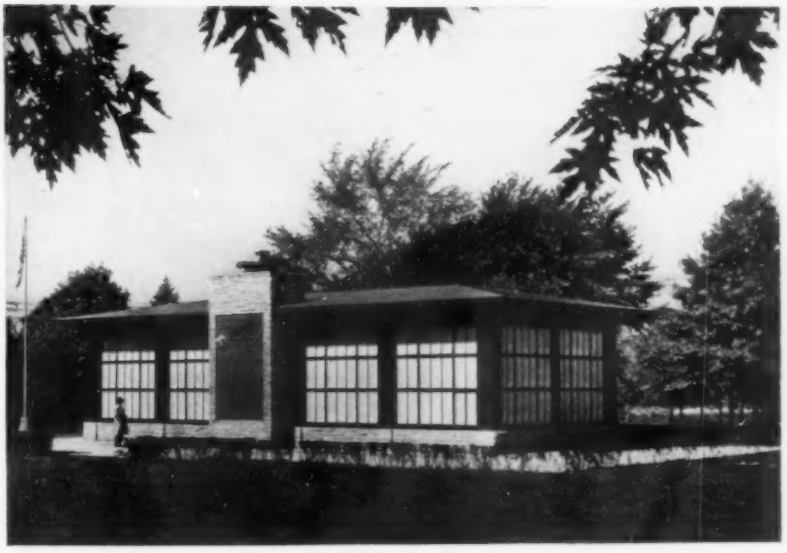
Living Words

There are inspiring statements from boys and girls sent from the line of duty to their loved ones all over this land. One thinks of the poem of John Magee, who fell early in the war. Numerous letters have been published locally, others are treasured at home, a source of comfort and strength, read again and again to friends. Many statements in these letters are filled with a new idealism, a clear realization that belongs to our own times. Why not search out these messages—in all parts of our land—each in his own area—and make those brief sentences the illuminating factors in our memorials? These could be gathered locally, and then nationally by some central body, and where no suitable statement is available in a locality, one might be selected from the assembled messages. Let the light of our own times illumine our memorials and guide our steps in the immediate future. Such inscriptions and roster of names would need their own quiet corner in whatever memorial might be chosen.

What Type Memorial?

What type memorial? Does it greatly matter if we hold on to the essential requirement that it help men and women, boys and girls in our communities to live a richer, more neighborly and integrated community life? Let us gather together—city officials, and representative men and women in all community groups—and study our local needs, opportunities and resources, plan as economically as we can, not forgetting to provide *amply* for public maintenance and direction of the memorial we may choose that it may continue to function as part of our community life. Let our choice be something with which we can *identify* ourselves and our life. Thereby real memorials will come into being and America will have turned the grief of war into the gladness of a new life.

ANNE HOLLIDAY WEBB
Associate Editor
THE AMERICAN CITY



ABOVE: *On the walls of this Honor Roll Memorial at Cleveland Heights, Ohio, are inscribed the names of all men and women of Cleveland Heights enrolled in World War II.*

RIGHT: *This commemorative pavilion was erected in Washington, D. C., after the last war to honor the men who lost their lives in that conflict.*

BELOW: *For almost twenty years, the World War Memorial Stadium and adjacent recreational facilities have been building community well-being in Greensboro, N. C.*

How to Maintain Motor Starters

By

J. O. CLEVENGER, Manager
Industrial Application Engineer
and
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Westinghouse Electric and Manufacturing Co., East Pittsburgh, Pa.

The abnormally heavy demand placed on water works and sewerage systems by increased population and war activities has emphasized the importance of proper equipment maintenance. Motor starters are the heart of motor driven equipment, and starter maintenance should be a "must" requirement on maintenance programs.

PREVENTIVE maintenance begins with the proper selection of the motor starter. If it is not suitable for the installation or if it has insufficient capacity, maintenance troubles are inevitable. The initial inspection of a new installation should be thorough, with its operation observed at load conditions before final acceptance. A time schedule for routine inspection should be established to meet the service requirements. As motors and their starters are always associated, a combined schedule can require inspection of both.

Do Not Lubricate Bearings

Because the resulting accumulation of dirt causes sluggish action, the bearings of contactors and relays are so designed that no lubrication is required. Bearing parts should permit contactors or relays to operate freely without friction. Monthly inspections for severe service and semi-annual inspections for average service will do much to prevent bearings and friction troubles.

When high currents that are difficult to interrupt are expected, powerful arc-rupturing structures are supplied to force the arc off the contacts and quickly extinguish it. These are called arc boxes or blow-outs and they completely surround the contacts. These contacts should be renewed when badly burned or pitted and when worn thin. If a contact surface is pitted or burned, it can be cleaned with sandpaper or by buffing wheel and used again, but when worn thin it should be replaced, the surface against which it is bolted should be thoroughly cleaned, and the screws or bolts that hold contacts in place must be tightened. It is important to keep the contact springs in good condition to insure suitable contact pressure. Renewal of thin contacts is necessary, also, since they lose their contact pressure when thin. A monthly inspection of contacts for pressure, available life, surface condition, temperature, and tightness should suffice for normal conditions. For severe operating conditions a weekly inspection may be advisable.

Designs usually are such that defective coils can be changed easily without much delay.

It is important to check contact pressures regularly. Weak springs or badly worn, thin contacts will reduce these pressures.

Renew badly burned contacts and clean the surfaces against which the contacts are bolted.

Shunts are generally flexible bands of woven copper strands that carry current from the movable contacts to a stationary stud. If the shunt is unduly bent its strands break and cause additional loading of the remaining strands. Shunts with broken strands should be renewed to prevent overheating and all terminal connections should be tight.

Alternating-current coils are designed to withstand 10 percent overvoltage and to operate the devices at 85 percent of normal voltage. Direct-current coils will withstand 10 percent over-voltage and operate devices at 80 percent of normal voltage.

Over-voltage tends to shorten mechanical life of contactor or relay, and shorten the life of a coil. Low voltage will cause sluggish action.

On a-c service, the coil current is much higher while the contactor is closing than after it is closed. A-c

coils are not designed to stand the open-gap or closing current continuously. Open-circuited coils are easily detected because they cannot operate the device. An ammeter connected in series with the coil would show zero current.

D-c contactors always operate quietly when closed: however, a-c contactors may be noisy. The laminated magnetic structure, necessary on a-c designs, must be held together tightly by screws, rivets, or other means. If loose the assembly will be noisy.

If the movable and stationary pole pieces do not fit well together or are dirty or rusty they will be noisy. If contactor is noisy, look first for a broken shading coil which is usually imbedded in a part of the laminated magnetic structure. A monthly inspection of oil-immersed equipment is adequate unless service is so severe that the oil deteriorates rapidly.

Relay Operation Dependent on Proper Liquid in Dashpot

When oil or any liquid is used in dashpots, regular inspection should be made to insure freedom from friction and the proper oil level. No substitution of oil or liquid used in dashpots should be made.

Thermal relays are subject to ambient temperatures and should be in a room temperature equivalent to that in which the motor is located, otherwise they may not operate to best advantage.

Keeping the working parts of the dash box clean and maintaining the correct liquid level, using the liquid specified.

Loose connections are a frequent cause of trouble, resulting in overheated parts that eventually must be replaced. Overheating may be caused by insufficient ventilation, excessive current, or more continuous service than was anticipated in the design. Resistors frequently fail from excessive temperatures. Periodic inspection is therefore necessary.

Keep Starters Clean and Dry

Moisture, dirt and dust are constant sources of trouble as they reduce insulation values of insulated wires and cables. They constitute a leakage path across which breakdowns occur between points of different potentials that would never occur on clean and dry surfaces. Routine maintenance should remove dirt and dust by blowing with dry compressed air, wiping or washing with suitable cleansing fluid.

Moisture in conduits is a frequent source of grounds, causing unsatisfactory operation. Preventing moisture in conduits is insurance against trouble. Drip-proof, water and air-tight enclosures may be provided. Insulation resistance should be checked regularly so that the presence of grounds can be detected and eliminated before trouble occurs.

Here are the high-points that should be checked to keep motor starters in good operating condition. They must be free of oil, dirt and moisture. No oil should be used on contacts or bearings of contactors and relays. Connections should be tight and wiring should be safe. Movable parts of contactors and relays must move freely and without friction. Contacts should be clean and tight with correct pressure and not worn too thin. Arc-rupturing devices must be in the proper operating position.

Bigger and Better Post-War Sewers for New York City

The Borough of Queens of the City of New York plans 82.4 miles of sewers for post-war construction

IMAGINE a sewer so immense that it could hold six subway trains side by side. Imagine, too, a sewer stretched from New York City to Pensacola, Fla., and you can get some idea of the great size of the system that serves the Borough of Queens. This sewer system now measures 1,150 miles and its larger 3 barrel sewer trunks could accommodate two subway trains in each barrel, or a total of six.

To give you some idea of the intricate nature of this system let us go back to 1898 when the sewerage system of Queens was comprised of 67 separate units, each serving a single municipality. It was in that year that these 67 municipalities were consolidated to form one of the five boroughs which make up the city of New York. The problem of consolidating these many separate municipalities into one unit was complicated enough, but complex as it was compared with the problem of integrating all the sewer systems into one unit, it was simple. This problem of integration even after 48 years is still in process of solution, the that the post-war sewer construction planned for the Borough of Queens is but another step forward in solving this very knotty problem.

In keeping with the immense nature of the sewer system involved, the post-war sewer program involves at present a total of 95 separate projects to be constructed at a total cost of $31,000,000. The size of the Borough, too, is 118 square miles—an area larger than the other four boroughs of the city combined. In 1910 it had a population of 500,000; the 1940 census figures revealed that it had grown to 1,370,000, and at the present time, according to estimates, it tops the million and a half mark.

This rise in population likewise was a factor in planning post-war sewer construction. Plans were prepared in anticipation of the increased flow that would be occasioned by this enlarged population.

The sewer construction which will follow the war will increase the total mileage of sewers appreciably, for only a small portion of the total will be the enlargement of sewers already in place.

This work will be comprised of service laterals of as small a size as 10 inches and will range in size up to the 3 barrel outfall sewers, one measuring 17½ feet wide by 9 feet high for a single barrel and another 16 feet by 10 feet. By this it may be seen that the construction of at least a portion of this work is comparable in size and complexity to the building of a subway. The total mileage of the sewer construction planned is 82.4.

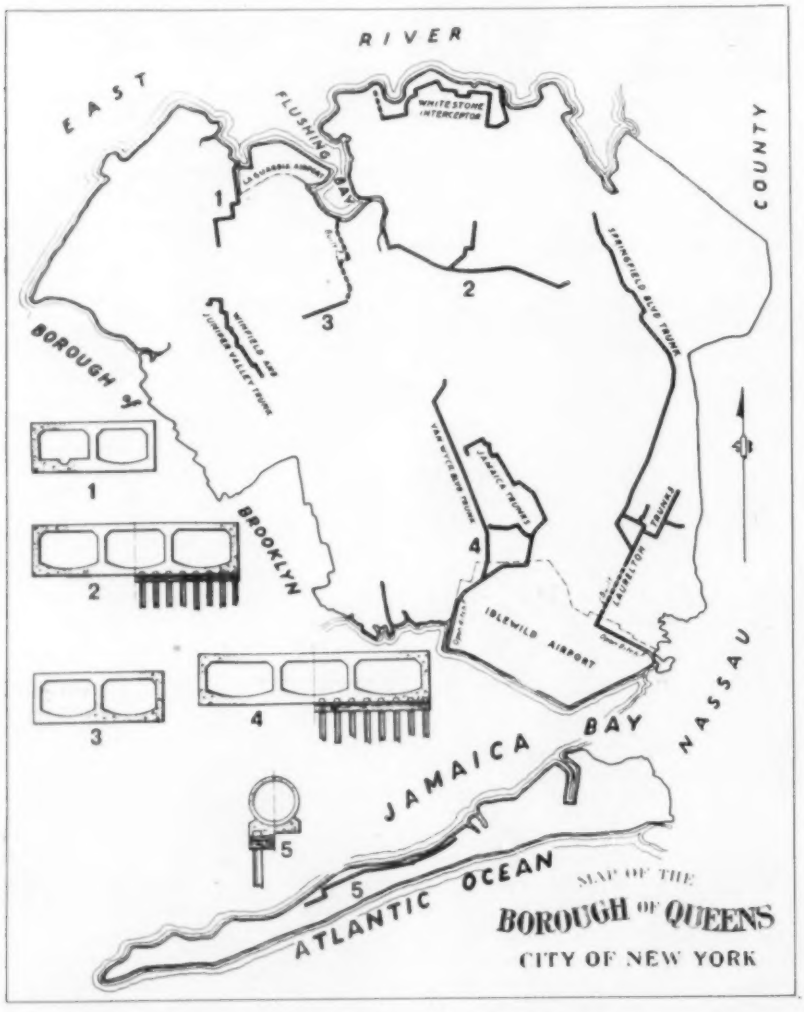
This work, designed under the direction of William H. Bertram, Engineer in Charge of Sewers, is under the supervision of William Raisch, Consulting Engineer for the Borough of Queens, and is a part of the more inclusive post-war planning program being formulated under Borough President James A. Burke. Under these men, the testing laboratory, in the charge of Leo Kampf, takes and tests soil at various levels along the whole length of the proposed projects, sometimes going as deep as 60 feet for samples. With the information thus obtained, designs are worked out to include adequate piling wherever unstable soil is encountered.

In this project, all lines which are smaller than 24 inches in size will be of vitrified clay pipe. All sewers of sizes larger than 24 inches will be built of reinforced concrete. All of the monolithic sewers, which will handle sewage with a velocity of 10 feet per second or greater, will be constructed with vitrified clay liner plates.

The progress of the planning of each project is kept and an over-all record of the whole 95 projects is charted. Progress of planning now is 61.8 percent complete.

With the construction of the Idlewild Airport going forward with great rapidity, it has been necessary to provide sewers to handle drainage from this area. Accordingly, bids were opened for the construction of a storm sewer line on the edge of the port area. The low bidders were Andrew Catapano on one contract, and Nicholas DeMenna & Sons Inc. on the other.

This line will be a 3-barrel line sewer marked 4 on the map. This section of the work was taken over by the airport authorities and will be conducted under the direction of Commissioner John McKenzie of the Department of Marine and Aviation, by Jay Downer who is Engineer-in-Charge.



These major trunk sewers are to be constructed after the war in the Borough of Queens. Heavy black lines denote the major sewer construction planned. Broken lines indicate those already built. **1,** THE 80TH STREET TRUNK SEWER, *is a double barrel line; each barrel is 13 feet 9 inches wide by 7 feet high. The total length of this proposed line is two miles and its cost is estimated at $1,700,000.* **2,** THE CORRIDOR TRUNK, *is a three-barrel line. Each barrel of this line measures 16 feet wide by 10 feet high for two miles and 14 feet 6 inches wide by 9 feet high for the remaining two miles.* **3,** THE HORACE HARDING BOULEVARD TRUNK SEWER, *is a double barrel line, each barrel of which is 15 feet by 9 feet for part of its length and 12 feet 6 inches by 9 feet 2½ inches for the balance. This sewer will measure one mile in length and cost $2,000,000.* **4,** A STORM SEWER, *is a triple barrel outlet. Each of its barrels will measure 17 feet 6 inches by 9 feet and will cover 1.4 miles. This will soon be constructed by the city of New York to provide adequate drainage through Idlewild Airport.* **5,** THE ROCKAWAY INTERCEPTOR, *will range in diameter from 24 inches to 5 feet 6 inches over its 4.6 miles of lines. Cost of this project is estimated at $500,000.*

Recognize Basic Duty of Prechlorination

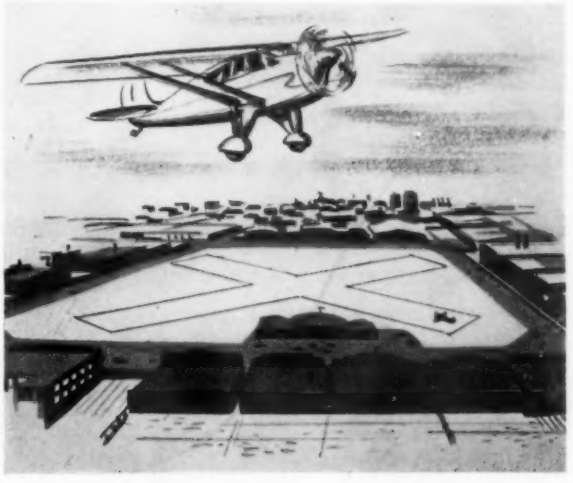
DON'T fail to keep in mind that prechlorination, whether in the form of breakpoint or some other method, has as its chief duty that of making sterilization complete and improving the operation of the filter beds and settling basins. Its ability to overcome taste and odor problems, while important, should be considered secondary to its protective features.

Break-point chlorinations, says Paul Laux, Superintendent of Water Works, Anderson, Ind., in a recent article in the *Taste and Odor Control Journal* published by Industrial Chemical Sales, is decidedly not a substitute for activated carbon and in many instances may increase the required carbon dosage. However, when prechlorination is necessary or desirable, it is the only logical form of treatment to use.

According to Mr. Laux, it is relatively simple to determine whether or not break-point chlorination has been obtained by using the orthotolidine flash color test. Briefly this consists of adding the proper amount of orthotolidine solution to a measured water sample. If color development is slow and intensity over a five-minute period is great, then breakpoint has not been attained. If color development is instantaneous and remains, then breakpoint has been reached.

How Thousands of Communities Can Establish Their Own Airports

ON the premise that the air age is not in the undated future but, through the terrible price which has been paid for the advancement in flying during the war, is actually here, the marketers of Esso Aviation Products have prepared a booklet which shows how American communities may speed the utility of flight and how the broader use of the private airplane may be of value and service to the community. The motor car made neighbors of persons dwelling townships apart: the airplane will make neighbors of the American and the Russian, the Englishman and the Filipino.



It is not the province of this booklet to go into the problem or discuss the future of the big commercial airport for scheduled transportation. Some have runways up to 2 miles in length and hangars large enough to enclose two or three football fields. The Esso booklet addresses itself to the simple landing area for private planes.

Such an airport or airpark, more often than not, may consist of nothing more than a couple of sod landing strips up to 500 feet wide by 2,000 feet or less in length; a fueling pit, a wind-direction indicator, storage hangars, a "hot-dog" stand, and a parking lot. From this foundation it can be developed to suit the individual needs of the community. It need be expandable only to its next class.

The 50-mile trading radius of the automobile will be stretched to 150 miles or more with the private airplane. In addition to this expansion of area and decentralization resulting from the creation of a desirable airport or airpark, the community will benefit because it will draw a progressive class of citizen to it. He will be the town-to-city air commuter.

It is probable that there will be two kinds of personal aircraft—the fixed-wing airplane with one or more engines, depending upon the speed of travel desired and probably much simplified as to control, and the rotating-wing helicopter. The small community airport can serve both kinds. Future runways for private aircraft probably will be shorter than now as technical improvements reduce takeoff and landing requirements.

More personal aircraft per population will be owned in rural communities than in the great metropolitan centers. There are now 3,000 civil airports and emergency landing fields in the United States; 6,000 airports would leave few communities more than 15 miles from an airport or airpark. Thousands of simple landing fields will reduce that distance.

The Esso booklet recommends a committee to include men of assorted talents: several men who are engaged in practical aviation activities such as a manufacturer of small aircraft, the administrative officer of a neighboring community airpark, a flying school and charter operator, and a representative of aviation-gasoline suppliers.

For the Committee

Two airparks of similar size and elaborateness can vary in cost by thousands of dollars. One might cost $5,000, the other $25,000 to $50,000. The cost of the proposed location may be too high for the investment. On the other hand, a higher cost for a more suitable location may save later costs and make the airpark successful.

Turf runways are entirely satisfactory for private light planes and will admit speeds of 70 to 80 mph. When traffic warrants, it is time enough to pave them. In the northern half of the country a generally satisfactory turf can be grown from a mixture of 80 percent Kentucky blue grass and 20 percent redtop. In the northeast the proportion of redtop can be increased. In New England a mixture of bent-grass and redtop is indicated; and blue grass in Kentucky and adjoining states.

Contour and soil determine drainage, and grading and trenching will do most of it. Avoid fills except on a firm foundation and with rolled gravel or crushed-stone base. Uniform and previous soils require no artificial drainage, nor do impervious soils. Soil that is pervious above but impervious below requires subdrains. Soil that is impervious above and pervious below can be drained with trenches cut through the impervious layer and filled with a porous material.

Where "made" runways are necessary, as where frost lines are deep, local aggregates such as sand-clay or clay-gravel may be used. Surface treatment with petroleum products waterproofs and binds the soil particles and makes the runway dustless. Soil-asphalt mixtures, long used in road construction, also give good results.

Equipment

The community airport should be plainly marked. On the roof of the tallest building in town a large arrow should point towards the field. If only the runways are usable for takeoffs and landings, they can be outlined with a 6-inch strip of white cement or whitewashed brick. Boundary lights can be installed when needed. An emergency lighting truck will be serviceable. A wind sock or tee is essential. Any other facilities are for the attraction of patronage. The first building will be a combination service hangar-office-stockroom in the corner of the field nearest the community. The office will be for the manager or the fixed-base operator with whom the community may contract for the use of the field in charter-flight, sightseeing, aircraft sales, and student instruction work. On fueling and oil facilities, the committee will consult a supplier of aviation fuels and lubricants.

Revenue facilities include an automobile service station operated under

contract, a parking lot, a lunch counter or restaurant, and telephone booths. Much practical information is contained in "Community Airports and Airparks," available without cost from Aviation Division, Standard Oil Company of New Jersey, 26 Broadway, New York 4, N. Y. The material in this booklet was reviewed and approved by such authorities as: Charles I. Stanton, Deputy Administrator, Civil Aeronautics Administration; John E. P. Morgan, Personal Aircraft Council, Aeronautical Chamber of Commerce of America; Lowell H. Swenson, Manager, National Aeronautics Association; John Wilson, Executive Director, National Aviation Trades Association; John Groves, Director, Operation Division, Air Transport Association; L. L. Schroeder, Commissioner of Aeronautics, Minnesota; and William L. Anderson, State Director of Aeronautics, Pennsylvania.

A wise community will interpret the message which has been written large in the skies and make itself a link, however modest, in the chain whose limits today, and still more tomorrow, are the span of a world.

Where We Stand Today in Housing

FROM some newspaper headlines which greeted the talk of John B. Blandford, Jr., on January 16, before the National Association of Home Builders, one might assume that the Administrator of the National Housing Agency had come to favor abandonment of the federal government's public housing policy after the war is won.

When Administrator Blandford voiced the opinion that the federal government should stop "programming" housing, he meant, of course, that he was opposed to the kind of control in the post-war period whereby the federal government would decide that a specific number of units at a given cost or rental should be built in a given locality.

While favoring local autonomy in programming, and maximum efforts by competitive enterprise in converting plans into action, Mr. Blandford's talk before the Home Builders stressed the vital role which the federal government must play in meeting post-war housing needs:

"I believe the federal government should then be ready with the various forms of financial assistance needed to help private industry broaden its housing market to the maximum extent possible under our present economic situation, and to help communities meet those remaining problems that are unquestionably beyond the present scope of private capital, including the problem of decent shelter for families of very low income who can't pay more than slum rents for either new or existing standard housing.

"I believe these programs of financial assistance should be utilized only to the extent required and under no circumstances be competitive one with another. They should be wares on the federal shelf with well-marked labels for the choice of private enterprise and local communities. And in every housing function assigned to the federal government by our democratic processes, I think we should call for maximum efficiency and economy, and the minimum procedure and personnel necessary to do the job."

Urban Redevelopment

On the subject of urban redevelopment the NHA Administrator said:

"I believe that the realities of the post-war world will demand decisive action to clear the slums, check the spread of urban blight, and build up blighted areas with sound, well-planned developments. It's clear to all of us that millions of our people are living in slums and shacks that clash with our proud talk about the American standard of living. It's clear that millions of other families, even though their houses have bathrooms and roofs that don't leak, are living in dreary surroundings that will become slums by 1955 or 1960 if we don't act to cure the situation. And it's equally clear that slums and blight together with the loss of tax revenues and the increased municipal expense that go with them are threatening the solvency of most of our cities.

"We have a formula for providing shelter for those who cannot pay an economic rent. Shortly proposals will be made to the Congress for strengthening this formula. But beyond the problem of structures there is the problem of the high cost of blighted city land, which generally has a strangle-hold over large-scale development. No one as yet has all the answers for an effective land assembly system that can break that bottleneck. Probably the final answer will involve a combination of municipal action, private construction, and federal assistance."

Jobs and Welfare

Expressing his conviction that "in the reconversion and post-war years there will be increasing recognition of the importance of housing by American communities and by the American people," Mr. Blandford added:

"I think the nation will identify housing as one of the big springboards towards more jobs, more consumption of materials and equipment and more investment in our post-war economy. I believe American cities and towns will face their housing future with fresh awareness of the close tie-in between a sound, well-planned community housing supply and a well-balanced, flourishing community economy. I believe the American public—the ultimate consumers of housing—will appreciate more fundamentally than ever before the significance of a decent home to the over-all welfare of the American citizen."

Municipal Employee Unions Officially Recognized

BY a 19 to 1 vote, following several months of public hearings and executive sessions, the City Council of Hartford, Conn., has adopted an ordinance permitting municipal employees to join unions, but prohibiting strikes, the Civil Service Assembly reports.

In reporting the action the Assembly said the Hartford Street Commission voted last March to recognize the street employees' union (AFL), and that the new statute placed the action on an official municipal basis and extended the recognition to unions in the fire, police and education departments. The ordinance directs all departmental administrative heads to establish in their departments "effective machinery whereby grievances, complaints, problems or suggestions" may be presented by the organization.

The Hartford action came a few days before the Baltimore Circuit Court, in a decision involving a labor contract between the city Public Works Department and local No. 825 (AFL), recognized the right of municipal employees to organize and deal collectively. Though the Baltimore decision invalidated the contract because it denied the Department the right to bargain with any other organization, a new contract was signed two days later incorporating every provision of the invalidated contract except the one in question, which in the new contract permits any organization to bargain for or on behalf of its members.

PHILADELPHIA—A new agreement effective May 1 between the Philadelphia City Council and the American Federation of State, County, and Municipal Employees (AFL) provides city recognition of the employees' local as sole bargaining agent for some 5,000 *per diem* employees in Philadelphia's public works departments; no discrimination among union and non-union members; a 2 weeks' vacation with pay after 1 year of service; double time Sundays and holidays; discharge and suspension subject to personnel rules of city but in accord with contract; no strikes nor stoppage of work.

Institute of Government Gives Practical Aid to Local Officials

The fascinating story of the establishment and growth of North Carolina's state-wide Institute where officers of every rank may learn efficient municipal and county administration

CITY purchasing agents, county tax collectors, sheriffs' deputies and a host of other local officials from all parts of North Carolina are again treking over to Albert Coates' Institute of Government at the University of North Carolina to learn how to do their jobs better.

A new sheriff, elected because he was a pretty good barber, may get his first chance to learn how to read fingerprints, and what the heck he IS supposed to do after all. County auditors are given the benefits of the Institute's exhaustive studies of the systems used in the state's 100 counties. Budget makers and purchasing agents will have sessions in modern methods, tax supervisors and county collectors will study the constitutional limitation on the rate of tax levy.

Beginnings

North Carolina's Institute of Government had its beginnings in the 1920's while Professor Coates was teaching a course in criminal law at the University at Chapel Hill, using a casebook of Supreme Court decisions as a textbook. He woke up one morning to realize that he was drilling students in decisions which had practically nothing to do with the day-to-day administration of government. Government, he saw, was not only what was in books, but was what thousands of local officials did in their jobs.

To bridge the gap between his teaching and practice, he went from the classroom into the offices of government officials. He joined the police force, and belonged successively to the sheriff's force, the state highway patrol, and various government agencies. He wove his way from one locality to another, following successive links in the chain of law-enforcement machinery.

He found that government was practiced differently in every county and in various parts of the same county and that there was the continual dilemma of new and inexperienced officers taking up the administration of law without any clear guide to follow. He learned that the laws governing

North Carolina owes its Institute of Government to the vision, courage, and unceasing efforts of Professor and Mrs. Albert Coates who, together, brought it through dark days and established it as an institution with support and recognition from both State and University. Today the Institute is being studied by states throughout the Union.

procedures were buried in textbooks, or in special rulings and decisions that had accumulated in scattered offices and departments, inaccessible to law-enforcing officers who were guided more by local lore than by actual rulings. There was no means of nor will to exchange experience, or to profit by what someone else had done in a similar situation. Instead, the constable still resented the policeman, and both of them would gladly have disposed of the state highway patrol.

Teaching and Practice

Albert Coates had thought of a better way to teach. He came back to his criminal-law class and the casebook and called in law-enforcement officials to help him with his students and to exchange views among themselves. And soon he was inviting law-enforcement officers at all levels, down to the most obscure constable, to join in a 3-day "convention" at Chapel Hill. When the ice of suspicion between municipal, county, and state officers was broken at this meeting, Albert Coates had reached the heart of the problem and was off to a hard race for better local government. The 3-day convention is now a 14-day intensive training school at which not only the Institute faculty and local law-enforcement officials participate, but where local officers learn from FBI and other experts in the field of government.

In the early 'thirties, while the Institute was still making its way among local government officials, it introduced its teaching in easy stages—2- and 3-day conventions, as the schools were called—often arranged so that officers could leave home in the morning, have six hours of teaching, and return home at night with only the expense of travel and the mid-day meal.

In this way local and district "schools" were held all over the state and by 1932 it was possible to bring together at Chapel Hill 300 representatives of all groups of city, county, state, and federal officials who united to form the Institute of Government on May 6 of that year.

By this time the Institute had discovered its aims—to bridge the gap between government as it was taught in the classrooms and as it was practiced in the city halls, courthouses, and state departments; to coordinate activities of officials in overlapping and sometimes conflicting government units; to bridge the gap of experience and knowledge between outgoing and incoming public officials, so as to provide continuity of government experience; and to bridge the gap between citizens and officials by providing machinery to keep citizens in touch with their government.

These were aims that took more than faith and a stout heart. It took a fighting spirit, the strength to reject defeat, and a capacity to keep on believing in the reality of one's idea. Professor Coates experienced all the hardships of a pioneer for almost ten

INSTITUTE OF GOVERNMENT HEADQUARTERS, CHAPEL HILL, N. C.

years after his Institute was organized, but he never lost faith in the ultimate objective.

The Institute Staff Gathers First-Hand Data

From the earliest days members of the Institute staff made investigations in various fields. One specialized in tax collecting, another in accounting and financing, another in the administration of justice in the courts, and so on. They went from city hall to county courthouse and on to state departments, collecting and comparing methods, practices, and techniques employed by various law-enforcement officers at different levels and in various localities. The emphasis was always on *government function* not on *units of government*. Thus, the Institute avoided the bias of a single point of view and brought expertness in the broader field that would have been impossible for its members to gain if they had concentrated on city or county government alone.

Guidebooks to Local Government

The next step was to set down these findings in guidebooks, written simply and concretely enough for any person with common sense to read and understand. The first guidebook, for law-enforcement officers, included scientific aids in crime detection, a complete manual of techniques and practices, and all the relevant laws so organized that the most inexperienced officer need have no trouble. Later, guidebooks for taxation and finance officials, court officials, health and welfare officials, election officials, and others were issued.

RIGHT: *M. G. O'Melia, special agent of the FBI, and a fingerprint expert, gives instruction to 46 law-enforcement officers attending a 2-weeks course at the Institute.*

The guidebooks are the texts for all Institute classes and are now distributed to every official in the state, including the 6,000 officers who have been students at the Institute of Government. Officers all over the state began to feel that the Institute was a kind of government referee. Floods of "down to earth" questions on specific problems came by letter or telephone and this led to the establishment of the Institute laboratory which demonstrates graphically good and bad government processes and acts as a center for the exchange of experience. An information service also began to play a major role in meeting demands from officers at all levels throughout the state.

Acquires Permanent Home

A few years ago the Institue of Government, aided by private citizens, acquired its own building and permanent staff of experienced men. In 1942 the Institute of Government was taken over by the University of North Carolina as part of the Extension Service, and it now receives state support. The citizens of North Carolina through county and city membership invest one-half cent per person annually for the support of this central laboratory where the techniques of clean, efficient local government can be collected, studied and passed on to every local office holder.

Schools for Public Officials

In practice, the Institute will hold any kind of "school" for any group of public officials. Today, eager scholars come from all over the state, including new and slightly nervous public officials as well as old-timers who want to improve methods in their own offices. In a two-weeks school for federal, state, and local law-enforcement officers, conducted by the Institute of Government not long ago, there were men whose ages ranged from 19 to 60; whose schooling ranged from the third grade in public school to one year in college; whose experience in law enforcement ranged from one month to thirty-two years; and who had previously worked as salesmen, bookkeepers, textile mill employees, plumbers, sailors, merchants, newspapermen, construction engineers, bankers, carpenters, and ten other occupations.

Data from every possible source is made available at the schools. Exhibits and demonstrations are held. Experts are invited to conduct classes on special problems.

Result, for instance: one county was discovered to have 142 separate transactions in the necessary steps taken to foreclose tax-delinquent property, each transaction requiring an entry, form or other paper-work. Simplification—and consequent economy—was easy when county officials saw how it was done in another county.

Private Citizens, Too

But this was not all. Professor Coates saw that the private citizens of North Carolina had a rôle to play. They are the ones who stand to gain by improved government. Guidebooks for discussion groups were prepared on highway safety, post-war planning, the proposed new constitution of North Carolina and amendments, Internal Security Agencies and

related civilian war activities, and other topics of civilian interest. Civilian schools, statewide, district, and local, were held, and a statewide school has been conducted to train civic leaders for post-war planning. This civic program is expanding and the Institute expects local citizens' organizations to supply at least a "corporal's guard" for the study of these government functions in every community.

This stream of a responsible citizenry is being fed from the schools with which the Institute of Government has close connections through teachers and the civics and government departments, and through student government organizations which have their own program and guidebooks—going on the conviction, says Professor Coates, that human beings who grow into the habit of governing themselves while they are boys and girls in school are less likely when they are men and women to turn over the reins of the commonwealth to a dictator or demagogue forever hovering on the outskirts of democracy.

Local Government More Ignorant Than Corrupt

Professor Coates long ago decided that local government was not so corrupt as it was ignorant. But whereas private enterprise had access to all sorts of research and efficiency services, local government officials did not. An official who dissipates $100,000 of public money through inefficiency costs the county just as much money as one who steals $100,000, says the Institute Director. "Knowledge is no guarantee of character," he says, "but neither is ignorance." His Institute is a fact-finding, idea-swapping, progress-inspiring center. There is hardly a week that the Institute is not full of scholars. They sleep in special dormitories, study day and night, go back home better equipped to do their jobs.

Especially important is the Institute's legal aid to the Legislature. During biennial sessions, Professor Coates establishes lawyers at Raleigh to observe the sessions. By midnight every night they have read every bill introduced, digested them, explained their purpose and probable effect, and a daily bulletin is put in the mail. Next morning, every member of the Legislature and the heads of city and county and state governmental agencies have that bulletin on their desks. Many a hasty and ill-advised piece of legislation has been exposed through this service, and the ancient game of "sneak" legislation has been made almost impossible.

An Institute for Each State

Perhaps nothing indicates more effectively Professor Coates' successful realization of his life-long aim than this item in his own story of "The Institute of Government" printed in the Institute's publication *Popular Government* for July, 1944.

The head of a municipal research bureau connected with a university in a distant state recently inquired if a stranger might come to Chapel Hill and "poke his nose" into everything concerning Institute of Government. "It may be," he wrote, "that one part of the post-war plans for this University will be an Institute of Government, stolen without apology directly from the University of North Carolina. For, if I get your idea, the lesson you teach will not be thoroughly mastered until there is an Institute of Government in each of these forty-eight states."

EDITOR'S NOTE: A Traffic Engineering Institute was held December 10-14, and a Street Construction and Maintenance Institute, December 14-15, 1944, by the Institute of Government with the cooperation of the Yale University Bureau of Street and Highway Traffic, the North Carolina Highway and Public Works Commission, and the North Carolina Department of Motor Vehicles.

Fewer Streets, More Play Space

To the Editor of THE AMERICAN CITY:

MUCH has been written about the saving in streets by the use of superblocks in platting. Herman Gardens (USHA Project), Detroit, which has now been in actual use for two years, offers a striking example not only of saving in streets but in the transfer of such salvaged areas to recreational use.

Herman Gardens is one of the largest permanent housing projects in the country. A half-mile square with a population of 10,000 persons, it has now been occupied long enough to demonstrate that with fewer streets, the area is more livable than it would have been under the straight-jacket of the gridiron pattern which once threatened it. This would have required 44 acres of streets and alleys. As replatted for the USHA project, only 13.3 acres of streets were required. Service drives (2.8 acres) and parking areas (11 acres) need not be included, since they correspond to private drives and space ordinarily occupied by garages.

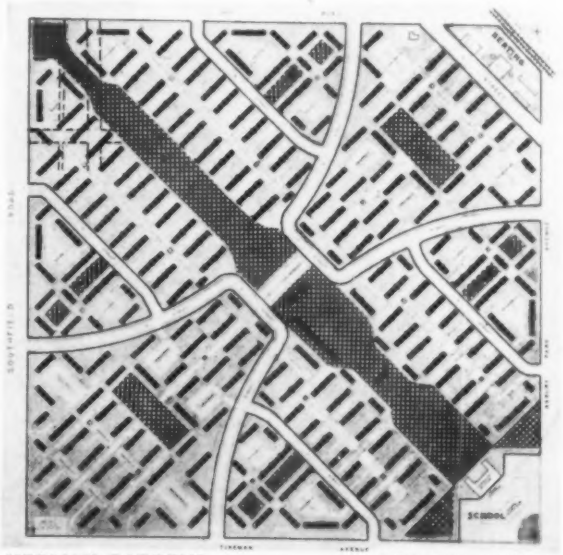
The plan also shows how the 18 acres of play areas were distributed so that at least one of these areas can be reached by any child in the project without crossing a street or a service drive. According to the standards of the National Recreation Association and of the Detroit City Plan Commission, these areas fall in the category of neighborhood parks and playgrounds, and from both an acreage and a service radius standpoint, this project surpasses the standards in that category. In addition, there are 4.3 acres of bituminous plazas 20 feet wide in front of all the houses, for roller-skating, tricycles, wagons, etc.

All of this play space was salvaged from what would ordinarily be street area, and there was plenty left over. (It would have been better to take a few more acres and widen out here and there. We could have achieved a better layout of game space.)

The significance of these findings is obvious. By skillful planning we can attain:

1. Ample play space without sacrifice of buildable area
2. Reduction of traffic hazards
3. Economy in construction and maintenance of streets

EDWARD A. EICHSTEDT
Detroit, Mich.
Landscape Architect



HERMAN GARDENS DETROIT, MICH.
George D. Mason Associates, Architects; E. A. Eichstedt & L. G. Linnard, Landscape Architects.

	Acres
Original gridiron pattern of streets (upper left)	44.0
Pattern of streets as built	13.3
Saving in streets	30.7
Acreage devoted to play areas (cross-hatched)	18.0

Net density, 17½ families, net acre; 15 families, gross acre

In the foreground is Lawton, Oklahoma's water treatment plant. To the far left may be seen a small portion of the dam and beyond, the impounded waters of Lake Lawtonka.

Meeting Unusual Water Supply Problems

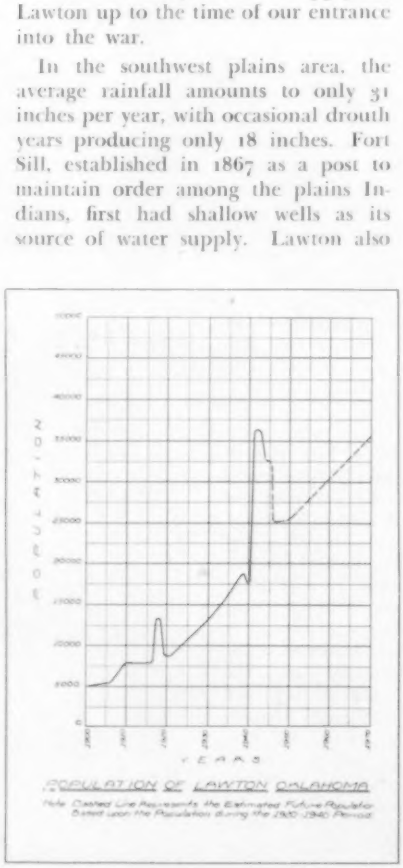
By WYATT B. HENDRICK
City Engineer
Lawton, Okla.

WATER SUPPLY *problems at Lawton, Okla., located in the great plains area of the west, have always been directly affected by the growth of Fort Sill, the United States Field Artillery School located there. In solving these problems through the years since her birth in 1901, Lawton has encountered a series of very unusual circumstances which make this story not only instructive but highly interesting.*

THE City of Lawton, located in southwestern Oklahoma, has had as a permanent water customer nearby Fort Sill, the home of the Field Artillery School of the United States Army. The present war, with its expanded training program for the school, together with the establishment of a Reception Center at Fort Sill, has increased the combined civilian and military personnel to be served from the city water supply system from a total of 26,600 in 1940 to 80,000 in 1943.

In meeting such a large and sudden increased demand for water a number of unique experiences were encountered. For a more complete understanding of these problems, however, let us go back a bit and examine the history of water supply for Lawton up to the time of our entrance into the war.

In the southwest plains area, the average rainfall amounts to only 31 inches per year, with occasional drouth years producing only 18 inches. Fort Sill, established in 1867 as a post to maintain order among the plains Indians, first had shallow wells as its source of water supply. Lawton also had a shallow well source of water supply from its establishment in 1901, when the country was thrown open for settlement. But in 1909, when supplies from this source were inadequate, it was decided to go to the nearby Wichita Mountains for a surface supply. Shortly thereafter this became the source of supply for Fort Sill.



The population curve for Lawton shows how the last war and this effected population. The over-all growth has, however, been steady.

Population increases for the city and the fort, together with the occurrence of periods of drouth, have through the years necessitated four increases in the reservoir capacity of Lake Lawtonka, until in 1938 the capacity amounted to 26,000 acre feet. In 1938 a greater supply of water was needed and a fifth increase in storage capacity was made by raising the height of the masonry dam from 60 to 70 feet.

Construction hazards during this operation necessitated the lowering of the reservoir level 18 feet, leaving available in storage an amount of water sufficient to supply both Lawton and Fort Sill under normal demands and normal rainfall for a period of two years. This project was completed in 1939, but a below normal period of rainfall starting in 1933 reached its climax in that year. With the total rainfall for the year only 18 inches, the water supply left in Lake Lawtonka at the time the construction was completed was all but exhausted. The problem was further aggravated by the fact that the ground during the peak of the drouth was so parched that the run-off from the water shed

supplying the lake had decreased to the vanishing point and the evaporation losses were extremely high, amounting to a total of 70 inches per year.

Water from Wild Life Refuge

The water supply was so critical at this time that the United States Wild Life Refuge granted the city permission to take water from nearby Lake Thomas. This too was close to becoming depleted when further permisison was granted to go four miles further into the Refuge and take additional water from Lakes Jed Johnson and Rush. To convey this water to the reservoir we had to lay four miles of steel pipe line on the surface of the granite terrain in order to raise the water over a separating divide. The combined supply of the four lakes, all seriously depleted, was used for a year. At that time steps were taken to redevelop the three old shallow wells abandoned in 1909. This was done and three 200-gpm Westinghouse pumps were installed. Simultaneously, exploration work for a deep well water source was started.

By this time the United States was actively engaged in the war. The War Department sounded us out to determine our ability to supply water for a planned expansion for Fort Sill. As a source of supply we proposed the as yet undeveloped deep well supply to take care of the expansion. This the Army accepted under a dead-line completion date.

Five 500-foot deep wells were then drilled and a 500 gpm Pomona pump was installed in each. When completed these wells provided a total capacity of 3.6 mgd. With a supplementary supply of .4 mgd from the shallow wells a sufficient supply of water was provided for both the city of Lawton and for the 18,000 men who were to comprise the 45th Division. The remaining lake water supplied the regular garrison at Fort Sill.

This combined system of five deep wells, three shallow wells, and four depleted lakes provided sufficient water so that the War Department could proceed with confidence to utilize its tremendous investment in training facilities at the fort. In November 1940 the drouth ended and Lake Lawtonka was completely filled by June of 1941. Things were looking up that year for the reservoir was filled from but one season's run-off whereas normally four years would be needed.

With the filling of the lake, in spite of the addition of a Reception Center and an increased Field Artillery Training program at the fort, the problem changed from a need for an adequate water supply to a need for water treating facilities. Likewise, because of the abundant lake water supply, it was possible to abandon the deep wells with their high cost of production and the objectionable chemical characteristics of the water except for periods of excessive demand.

The masonry dam at Lake Lawtonka was raised from 60 to 70 feet to provide more water storage for Lawton.

Original Facilities

The water of Lake Lawtonka, coming off of a granite and limestone watershed, is low in turbidity and dissolved solids. Originally the water-treatment plant consisted of sedimentation basins (largely to remove algae), rapid sand filters, and a clear well storage.

The sedimentation basins, rated at 9.5 mgd on the filter area at 2 gallons per square foot per minute, were not of sufficient size to permit a maximum of efficient operation. Also, the clear well storage was not large enough to permit continuous operation of the plant. Peak loads occurred in the afternoon when the men returned to camp from the day's training when the civilian consumption was greatest.

To meet these problems we immediately did two things: established a system of zoning for the use of water for lawns and gardens, which alleviated the cause of peak civilian demands, and applied for Lanham Act funds for additional treatment facilities.

Through the Federal Works Agency funds became available and we proceeded to provide a more adequate treatment plant. The sedimentation basins were increased in capacity from 1.5 mg to 2.2 mg and four Chain-Belt, Rex Slo-Mixers were installed to provide a better floc. An additional 1 mg concrete storage reservoir was constructed. To increase the capacity of the gravity feed supply lines from the plant to Fort Sill a booster station was installed on the supply line. One 250-pound Wallace & Tiernan chlorinator was installed at the filter plant and one on the lines supplying the fort.

Because our water supply problems have always been in common with those of Fort Sill, the present emergency conditions were presented to us long before the outbreak of actual hostilities. Not only was this more or less unique but in solving our problems we also encountered a number of unusual experiences, which were:

First, while the lakes were at their lowest level and before the well supply was in operation, a severe cold wave occurred and temperatures dropped below zero. To further aggravate the situation engine trouble developed at the pump providing the most water to Lawton, and before the line could be drained, two miles of line had frozen and burst.

Second, thawing out the line and welding it produced a number of grass fires in the Wild Life Refuge which threatened to get out of control.

Third, the presence of fluorine in amounts of 13 ppm in the deep well source of water made it necessary for use to provide fluorine-free water to young children in order to safeguard their teeth from developing mottled enamel should it be necessary for us to use the deep well source of supply for any length of time. This was done by providing treated lake water in specified storage tanks where fluorine-free water could be obtained in need.

(Concluded on page 99)

This building, housing the pumps and blowers, is part of the Sewage Treatment Plant of Gary, Indiana

Economical Operation at Gary's Sewage Treatment Plant

Cities contemplating post-war sewerage projects will be interested in the value of gas produced and utilized for power purposes at the Gary, Ind., activated sludge plant

THE Gary sewage treatment plant has a cost-ceiling system that is notable among all cost ceilings in that it really works. Ever since 1940, when the plant went into operation, it has been able to hold operating costs down to slightly less than $9.00 per million gallons of sewage treated.

In 1941 costs ran to $9.42, in 1942 they dropped to $8.79, and in 1943 they went still lower to $8.70. This year, however, because of a decreased sewage flow occasioned by drought conditions and higher labor costs, the cost of treatment is up somewhat. These low operating costs have not been achieved by sacrificing anything in the quality of sewage treatment performance. Since the plant has been established, it has consistently produced a reduction in suspended solids of better than 96 percent and in 5-day BOD, a reduction of close to 94 percent.

The plant was designed and built by Alvord, Burdick and Howson, Chicago consultants. It utilizes the separate sludge digestion system to furnish primary treatment and activated sludge for secondary purification. The design is hydraulically based on a flow of 40 mgd, equivalent to a population of 170,000. One feature includes garbage grinding equipment so located as to discharge ground garbage into the sewage flow.

Perhaps the most important reason for low operating costs in the face of rising prices elsewhere is the incorporation of self-supporting features in the plant. Much of the power required to operate the plant is derived from digester gas. The plant has 5 Worthington pumps, 3 of 20-mgd capacity directly connected to Worthington 175 hp engines, and 2 of 15-mgd capacity electrically powered. These gas-engine pumps are able to furnish power for most of the pumping requirements, and, fortunately, the digesters are still producing gas at no increase in cost. About 90 percent of the sewage is pumped with power furnished by this gas.

The plant requires an average of 0.4 to 0.5 cubic feet of air per gallon of sewage for the activated sludge process. This air produces a reduction of 1.2+ pounds of BOD per 1,000 cubic feet used. Approximately 97.5 percent of this air also is blown with power furnished by sludge gas. The aeration equipment includes two 7,000-cfm Roots-Connersville positive displacement blowers connected directly to two 300-hp Cooper Bessemer gas engines and one 5,000-, one 7,000-, and one 9,000-cfm Elliott centrifugal blowers.

The gas production has averaged 1.49 cubic feet per capita for the past three years. On the basis of sewage flow, calculations show approximately 2½ cubic feet of gas per pound of solids or 5½ cubic feet per pound of volatile solids. The gas is collected in 3 unheated secondary digestion tanks each with gas-holding capacities of 60,000 cubic feet. For primary digestion the plant has 5 additional tanks with fixed roofs and 5 coils of 1½-inch pipe to heat them. Most of the heating is furnished by the water used in cooling the engines. The primary tanks are Dorr-equipped with agitators.

With the high rate of gas production and the low air requirement, it has been possible to operate the Gary plant with power at a low cost. Computed on the basis of a contract for

gas with the Northern Indiana Public Service Co., the value of the sludge gas used for the past 3 years would be $20,877.66 for 1941, $22,535.80 for 1942, and $20,946.44 for 1943. The total for the three years is $64,359.90, or an average annual saving of $21,453.30.

To effect treatment, the plant first shreds the large solids in the sewage in a battery of five 25-inch Chicago Pump Co. Comminutors. It then removes inorganic grit by means of a pair of Link-Belt grit chambers designed to furnish 1½-minute detention for the design flow of 40 mg of sewage. The sewage then goes to 4 Dorr Clarifiers, 75 feet square, designed to furnish one hour's primary detention at the rated flow of 40 mgd. The effluent from the settling tanks is aerated in a battery of 10 aeration tanks equipped with Chicago Pump Co. stationary diffuser tubes (only 5 are required for operations at present). The tanks are 300 feet long and 30 feet wide with a 16-foot side water depth. These tanks furnish six hours detention time, not including the return of sludge. The actual aeration period averages slightly under four hours. Final settling is accomplished in a set of 8 Dorr clarifiers giving two hours detention at the rate of 40 mgd.

The plant has two Jeffery garbage-grinding units each with a capacity of 10 tons per hour.

Gary makes no effort to realize any income from the sale of its dried sludge but gives it away to those wishing to use it for fertilizer. Regardless of this offer, however, Gary has had some difficulty disposing of the sludge since gasoline rationing went into effect. The sludge is dried on open drying beds designed on the basis of 2.0 square feet per capita for the anticipated 170,000 population.

W. W. Mathews, Superintendent of the Gary, Ind., sewage treatment plant, compiles and issues a very comprehensive yearly report of the plant's operation.

Houston Gets Needed Water

By J. M. NAGLE
Director, Department of Utilities
Houston, Texas

THE wartime growth and development of industries along the Houston, Texas, Ship Channel created a need for a greatly increased supply of water for the Baytown and Pasadena areas of Houston. These areas had experienced an enormous growth because a large number of diversified war-connected industries had been established there. The industries together employ an estimated 90,000 workers.

This is a story of how the huge amount of water needed by these industries was supplied by the city with the aid of the Federal Works Agency.

Originally, the water supply for this entire area was secured from wells. But with increased industrial demand a noticeable lowering of the groundwater levels resulted, and because of the possible intrusion of salt water, the entire water supply for this area was endangered.

In order to conserve the groundwater supply as a source of potable water, it was decided that a supply of surface water should be developed to furnish raw water for industrial uses. Studies were made and the San Jacinto River was chosen as the most suitable source of supply.

The project consists of a pumping station located on the San Jacinto River about 15 miles northeast of Houston. Water is pumped into the two newly constructed storage basins. From each storage basin a canal has been dug; one leads to the Baytown area, the other to the Pasadena area. A total daily maximum delivery of water through these two canals is 80 mg.

The project was constructed federally with an allotment of Lanham Act Funds of $2,800,000.

A contract for the sale of the pumping station on the San Jacinto River and for the West Canal, which serves the Houston and Pasadena areas, has been made between the Federal Works Agency and the city of Houston. Arrangements have also been made between the Federal Works Agency and the San Jacinto Reclamation and Conservation District for the purchase by the latter of the East Canal which serves the Baytown area.

The city of Houston will furnish water to the District's East Canal from the river pumping station under a contract which has been made between these two parties. After the completion of the San Jacinto River dam the District has an option of buying water from the city of Houston, if it does not elect to construct its own dam across the San Jacinto River upstream from the city of Houston's proposed dam.

The pumping station is located on the west bank of the San Jacinto River, and the East Canal is connected to it by a force main under the river.

Long-Range Program

As a part of its long-range program, the city of Houston plans to construct a water filtration plant located on the West Canal just east of the city limits to augment its municipal water supply.

The existing river pumping station does not afford facilities for any storage of water and Houston contemplates the construction of a dam across the San Jacinto River to impound 152,000 acre-feet of water. It is expected that the industries along the ship channel east of Houston will use large quantities of raw (untreated) water, and if in the future they need an additional treated water supply, the filtration plant can be enlarged to meet their demands and the needs of Houston's consumers in the city proper. The storage reservoir which is contemplated will be capable of furnishing a supply of water to Houston and the industrial area of 150 mgd. Approximately 113 mgd is now being pumped from ground water sources. We plan to continue this pumping and the San Jacinto River water supply will merely augment this source.

The people of Houston recently approved the issuance of $14,000,000 in water revenue bonds. These bonds have been sold. Of this bond issue, $5,000,000 will be used for the construction of an additional well-water supply. This will consist of drilling 6 additional wells in the southwest section of the city, the construction of a high service pumping station, and an additional arterial and distribution main to furnish a total of about 18 mgd.

Approximately $1,000,000 will be paid the Federal Works Agency for the West Canal; $5,000,000 will be used to construct the dam and the pumping station on the San Jacinto River; and $3,000,000 will be spent for the filtration plant and the transmission line from the filtration plant to the distribution mains inside the city, and for a concrete lining for the West Canal.

Priorities have been granted for the construction of the additional well-water supply and the arterial and distribution mains. This work is already in progress and should be completed sometime during 1945.

Enlisting Citizen Cooperation for Sewage Treatment and Other Coastline Improvements

LET'S GO SWIMMING! . . . . .
WHERE CAN WE PUT ON OUR BATHING SUITS?
IN OUR AUTOMOBILE?
DRIVE HOME WET?
"HANG YOUR CLOTHES ON A HICKORY LIMB"?
WE NEED
• DRESSING ROOMS
• SANITARY FACILITIES

THIS tiny reproduction shows one of the forty 9x12-inch pages of "Coastline Plans and Action," listed on page — of this issue. The actions needed for the development of the Los Angeles metropolitan coastline are summarized by the authors, Donald F. Griffin and Charles W. Eliot, as follows:

You, the Citizen—Let your representatives in governments—big and little— hear from you. It is your responsibility to secure action by petition, urgings, voting and watchfulness.

The Coastline Municipalities—Can contribute land and money for land purchases. Can organize parking districts and provide parking facilities. Can treat their sewage or reach agreement with Los Angeles for joint action.

The City of Los Angeles—Should finance and build sewage treatment works. Make more general and detailed plans and specifications.

Your County—Coordinate plans in Master Plan for Shoreline Development. Can contribute land and money for land purchases for beach and park.

Your State—Establish Coastal State Park; with funds for lands and construction. Agree with Federal Beach Erosion Board on steps for erosion control. Should establish priorities and construct freeways along and to the coast. Should legislate for urban redevelopment.

Your Federal Government—Should assist on beach erosion, Marina del Rey, Alamitos Bay, Commercial Harbors, urban redevelopment, and postwar public works.

Have You Taken Your Part?—Opportunity is here for action to restore the wasting assets of your *coastline* by development of Los Angeles Coastal State Park, the Harbor, and Long Beach waterfronts.

Access

The beaches, coves, bluffs, and harbors should be in *public ownership* with adequate access roads, pleasure drives, and parking areas.

We must bulid a sewage treatment plant to remove the menace to health and provide the people with access to *open clean beaches*. Regular maintenance crews are needed to keep beaches clean.

To avoid delay when the war is won we need action now on *more plans*, detailed engineering studies, specifications, and financial arrangements.

Cooperation among all agencies concerned is needed to establish a *state park* and to secure the land, provide freeways and access, stop beach erosion, and provide for development and maintenance of facilities for recreation. Then the redevelopment of adjoining private proverty will naturally follow.

We have the general plans and a program. Now it is for *You the Citizen* to determine which projects you want and when you want them. *The sands of time are running out.*

Reporting on the Negro Problem Confronting the Nation

IN the belief that people of this country are giving too little attention to the problem of interracial relations, especially those between Negroes and whites, *The Dallas Morning News* recently published a series of ten articles on the subject, which are now available in pamphlet form as "Negro Problems Confronting Nation." The articles were written by Barry Bishop, staff writer of the newspaper, as a report of a tour of northern and southern cities, including Chicago, Detroit, Pittsburgh, Philadelphia, New York, Cincinnati, and Richmond, Va.

The critical nature of the segregation problem in the pattern of American life is confirmed by this survey. Observations point to widespread support for segregation among American people and a tendency—even where no segregation regulations exist, as in Philadelphia—for actual segregation to assert itself in custom and practice to a large degree. Even among Negroes themselves, there is strong class-conciousness which insists on social zoning, at least.

What Does the Negro Want?

When it comes to the point of view of the Negro, as reported by Mr. Bishop, Earl Brown, Negro researcher and writer for *Life* Magazine, says: "The Negro needs better housing, better health, better jobs, but his psychological situation is his desire to be recognized as a human being and as a citizen." Mr. Brown believes that "Negroes actually prefer to live in their own communities if they can get adequate housing, schools, parks, and other civic advantages there, but they don't want to be forced to do so. They want to be free to go where they please and to make their homes where they are financially and intellectually able to go, and move as full citizens on a par with their neighbors."

Roy Wilkins, assistant secretary of the National Association for the Advancement of Colored People and editor of *The Crisis*, national Negro publication, says: "The Negro wants equality. Segregation and Jim Crowism always mean inequality. Negroes want full and complete citizenship as guaranteed under the Constitution. They want all opportunities, burdens, and privileges of citizens."

The Conflict

The conflict between these objectives as expressed by Negro leaders and actual practice in much of the North and South is sharply defined today and gives rise to racial tensions which have burst forth in Detroit, Philadelphia, Chicago, and other cities in both North and South. In the opinion of Mr. Bishop, lack of adequate housing and economic inequalities are the

immediate causes of much of the tension in these areas. When seeking a solution that will work in the years to come, it is pointed out in these articles that 10,000,000 of the 13,000,000 Negroes in America are actually in the South, representing all stages of social development. Will Southern leaders find a practical solution which can serve as a national pattern, is asked.

Virginius Dabney, Editor of the *Richmond Times-Dispatch*, as reported by Mr. Bishop, does not believe that the complete elimination of segregation is necessary or desirable at this time to solve interracial tensions. He advocates abolishing segregation on streetcars and busses in Virginia, urges the appointment of Negro police for Negro communities and the establishment of Negro hospitals with all-Negro staffs. The Negroes, he observes, are not asking for an over-night revolution in race relation, but a share in the good things of life—better education, better health, better welfare, better jobs, better opportunities. They are seeking not social equality, but equality before the law. Recognizing the need for greater educational facilities for Negroes at all levels, he recommends interstate cooperation in providing these facilities and regional effort of several states in establishing higher educational institutions, centrally located for Negroes. The Southern Regional Council, chartered January 6, 1944, with headquarters at Atlanta, Ga., "seeks to attain through research and actual programs the ideals and practices of equal opportunity for all people in the region. . . ."

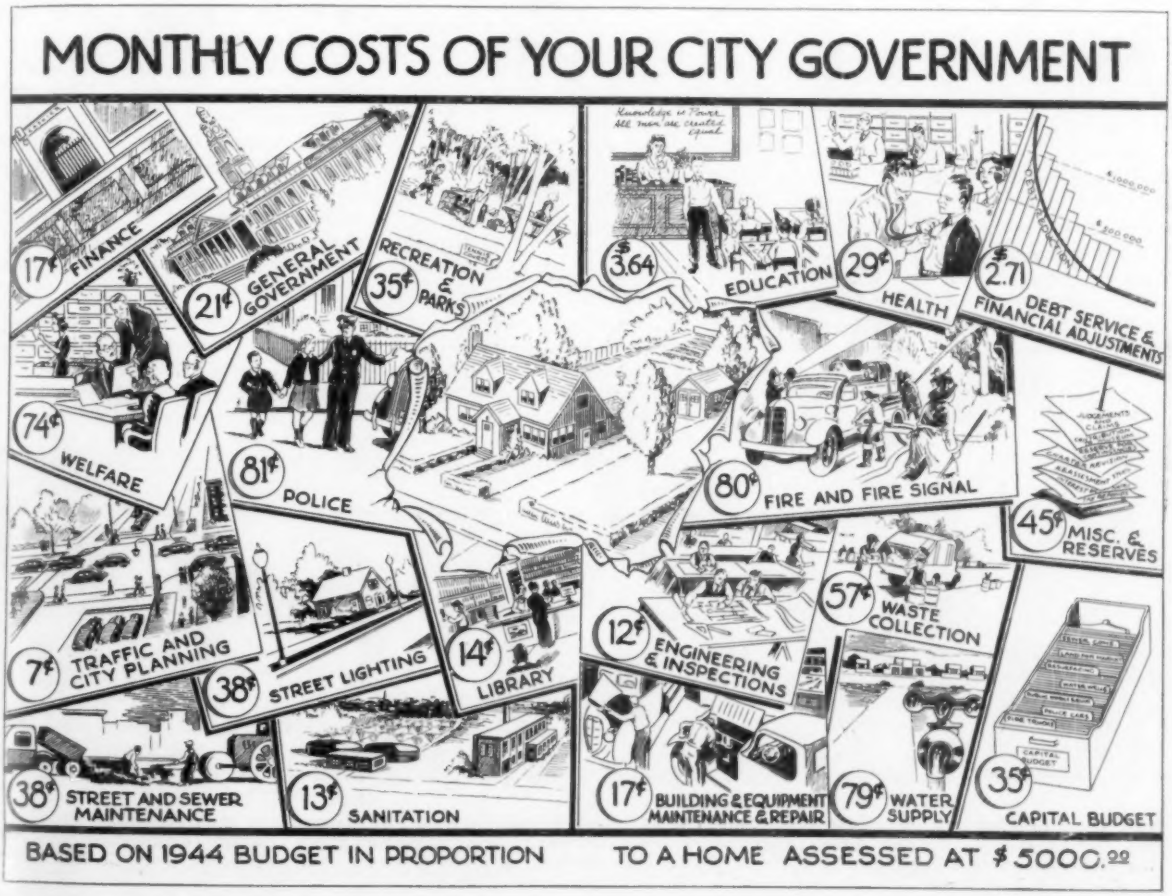
Will the South Find a Solution?

From Mr. Bishop's articles it appears that the larger industrial cities of the North are less well equipped to find a solution to interracial tensions than is the South, where the problem in its manifold aspects and traditional background must be solved by evolutionary rather than revolutionary steps. Morever, the new industrial economy in the making in the South needs the Negro and, with some practical program of adjustments, both white and Negro can together find their greatest opportunities. Dr. Gunnar Myrdal in his monumental work "An American Dilemma," is quoted by Mr. Bishop: "In this issue (of reaching the American creed and ideal of democracy) the Negro problem is not only America's greatest failure but also America's incomparably greatest opportunity for the future. America can demonstrate that justice, equality, and cooperation are possible between white and colored people."

The most advanced southern leaders say: "We must strive to keep segregation from meaning discrimination, which cannot but breed discontent and strife." These points made by Mr. Bishop reflect largely the southern point of view, where the problem is indigenous and exists in all its aspects, and where it must eventually find solution.

What a Home Owner Buys with His City Taxes

Through the courtesy of C. A. Harrell, City Manager, and W. A. Collar, Administrative Assistant of the City of Schenectady, N. Y., THE AMERICAN CITY is presenting this clever method of informing citizens as to what various municipal services cost the taxpayer. The original chart appeared as a double-page spread in two colors in the current edition of Schenectady's "Your City Government" report.


MONTHLY COSTS OF YOUR CITY GOVERNMENT
17¢ FINANCE
21¢ GENERAL GOVERNMENT
35¢ RECREATION & PARKS
$3.64 EDUCATION
29¢ HEALTH
$2.71 DEBT SERVICE & FINANCIAL ADJUSTMENTS
74¢ WELFARE
81¢ POLICE
80¢ FIRE AND FIRE SIGNAL
45¢ MISC. & RESERVES
7¢ TRAFFIC AND CITY PLANNING
38¢ STREET LIGHTING
14¢ LIBRARY
12¢ ENGINEERING & INSPECTIONS
57¢ WASTE COLLECTION
38¢ STREET AND SEWER MAINTENANCE
13¢ SANITATION
17¢ BUILDING & EQUIPMENT MAINTENANCE & REPAIR
79¢ WATER SUPPLY
35¢ CAPITAL BUDGET
BASED ON 1944 BUDGET IN PROPORTION TO A HOME ASSESSED AT $5000.00

Virginia, Minnesota

Furnishes Water, Electricity, Gas and Heat

Its successful pioneering in central heating holds post-war promise to other cities

By M. C. BRIGHT
Superintendent of Utilities
Virginia, Minn.

VIRGINIA, MINN., often called the Queen of the Iron Range, is the largest city in the United States that centrally produces and distributes heat throughout its entire community. Our city furnishes heat to almost all of our 13,000 residents and to our industrial and commercial establishments as well. Moreover, we combine this function successfully with that of supplying electricity, water, and gas for the community.

Adequate heating is important in our community. Winters come early, stay long, and remain rugged. The failure of a heating system in the dead of a Minnesota winter would be catastrophic. Our heating system could not have had a more exacting trial.

The system began back in 1913 when the city bought the privately owned water works and electric plant and went into the business of supplying water and power. Also in 1913, a large lumber mill was operating here, generating its own power by burning waste fuel, a by-product of the lumber mills. Like many mills of this type the supply of electricity and steam was more than ample. Consequently, the management negotiated with the City Utility Commission for the sale of this excess power and heat at a relatively low cost. From this beginning, the vision of a central heating system became a practical reality.

To properly utilize the heat and power available, the city enlarged the plant that it had acquired by erecting several buildings and installing a mixed-pressure steam turbine for generating electricity from low-pressure exhaust steam. The city also installed a system of steam distribution piping to those buildings where it was desired. As the lumber mill continued to provide cheap steam and electric power, the city was able to develop and expand the heating and generating facilities out of current operating profits.

This system appealed to our practical minded people, and consequently it grew as its advantages became more obvious. The system gradually expanded until at the present time it serves practically all the city, the only exceptions being those few outlying districts impractical to reach because of the long supply lines required.

Things continued relatively uneventfully until 1929 when the lumber mill was forced to close down because the supply of logs became depleted. However, this did not curtail the activities of our plant. On the contrary, it actually set it on its feet as an independently operating unit.

The city promptly sold its old generating equipment, constructed a new boiler plant to take the place of the defunct mill boiler, and installed two additional condensing bleeder turbines consisting of one Westinghouse 1500 kw and one General Electric 2500 kw condensing bleeder turbine generator sets of .8 pf, 160 psi and 2,300 volt generators; each is equipped with Westinghouse low-head jet condensers. From that time on, we were entirely on our own resources as far as production and distribution of utility services were concerned.

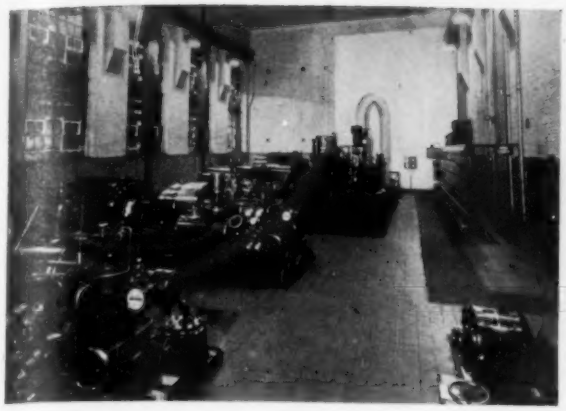
The steam-heating system continued to expand by zones and districts; our latest addition covers the so-called "North Side" project serving a substantial part of the city. It comprises a complete installation of high pressure main line, low pressure distribution, and service connections for a substantial portion of the city previously not served. Completed in 1940 under the WPA program, the work was of great benefit to the city and an outstanding example of successful use of government funds and work projects.

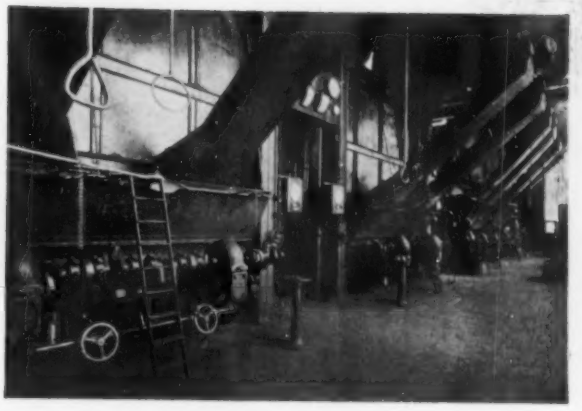
The utility now consists of a central generating plant containing extraction condensing turbines for generating the electric power requirements of the city as well as supplying a portion of the steam used for heating. The greater proportion of the heating steam, however, owing to the size of the heating system, is supplied directly from the boilers through reducing valves.

Our water supply too has not followed the usual pattern. We obtain it primarily by pumping from a nearby iron mine. The water is pumped out of the mine to permit mining operations, the city uses what it requires, and the surplus is wasted. Deep well pumps lift the water from the mine to a settling basin located on a hill nearby.

These pumps consist of one 2,000-gpm Layne pump operating against a 625-foot head which pumps directly to the hill reservoir; one 2,000-gpm Layne

LEFT: *What in other cities would be furnace, coal and ash space, is living space for Virginia residents. A Virginian is readying guns for a deer hunt—a popular sport here—in a recreation room occupying the usual furnace space.* RIGHT: *These houses were built after steam had been brought to this section and have no chimneys. The snow, several days old, is soot free. Central heating has obviated this nuisance.*





TWO VIEWS OF VIRGINIA'S STEAM HEATING—ELECTRIC POWER PLANT

LEFT: *Of the four turbo-generators two are a-c 1000 kw Allis-Chalmers, one is a 1500 kw Westinghouse and the other a 2500 kw General Electric. The latter two are of the condensing, bleeder type.* RIGHT: *The boilers are Westinghouse stoked.*

pump operating against a 155-foot head which pumps to a 2,000-gpm Wilson-Snyder horizontal centrifugal booster pump which in turn pumps the water to the hill reservoir; a 1,000-gpm Layne deep well pump also lifts water to another 1,000-gpm Wilson-Snyder pump which in turn boosts it to the reservoir. These pumps which are all electrically driven are housed on top of a 160-foot mine shaft. They have handled enormous quantities of abrasive material over a long period of time and have proved reliable and sturdy pieces of equipment.

On entering the settling basins the water is mixed with alum and allowed to settle for 24 hours. The water is then chlorinated at the outlet of the settling basin and flows from there to the filtering and pumping plant. The filter plant is located at an average elevation of about 100 feet below main water level in the settling reservoir on the hill. Thus, pressure is sufficient to provide back-wash water for the filters which can be washed by an arrangement whereby four of the five filter tanks provide water for washing the fifth. The filter plant consists of five large tanks complete with an underdrain system, and arranged to operate in parallel; the capacity of the entire filter installation is 2,000 gpm at normal rate of flow.

The filter plant was installed by the writer in 1937 and the equipment was furnished by The Permutit Co. This plant has handled some rather difficult water turbidities caused by finely suspended paint rock with almost complete success. To get successful filter operation, we have to add about 4 ppm alum in solution to form a good floc and provide satisfactory coagulation and sedimentation.

The clear-water well, one million-gallon capacity, is located directly under the filter plant. City pumps take their suction from the suction reservoir connected to this reservoir.

Gas Plant

The city also operates a carburetted water-gas plant with a maximum capacity of about 240,000 cubic feet per day. This plant is fairly new replacing one unit of an old two-unit water-gas plant using coke. Enrichment is obtained by the use of residual fuel oil or distillate, whichever appears most advantageous. The gas plant, comprising pressure storage facilities, generator house, purifier and other buildings, is located just outside the city. The new part of the gas plant was built in 1941-42 by C. I. Tenney, Consulting Engineer, along the lines of his own developments and has operated very satisfactorily, meeting performance guarantees in all respects. We are well satisfied with this plant.

The electric generation and distribution follows the conventional lines for a utility serving a community of this size. The system is fairly modern and while the generating facilities are just about adequate at the present time, we will soon have to increase our generating capacity. Plans are now under way for an increase in the capacity of our boiler plant which comprises 5,518 boiler hp in water tube boilers. Total generating capacity 7,500 kva, 6,000 kw at 80 percent power factor, 4,000 kw of this being in condensing bleeder type turbines installed in 1930 and 1937 and supplying part of the steam heat.

Consumers for each of our services are as follows:

Electric	4,526
Water	2,864
Gas	2,789
Heat	2,541

Gross income in the various departments covering the fiscal year ending September 30, 1944:

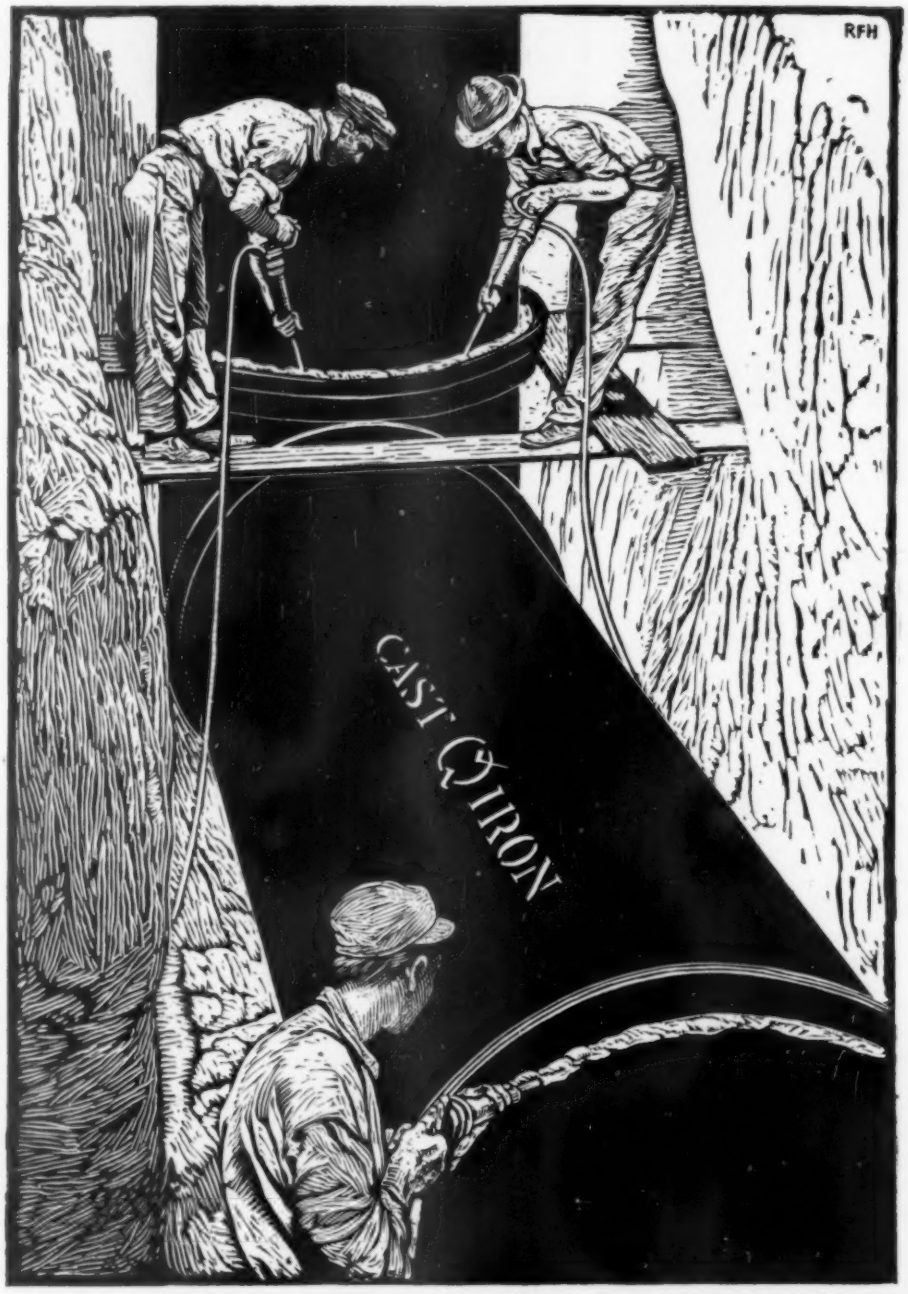
Light Department	$292,518.21
Water Department	91,436.53
Gas Department	52,242.84
Heat Department	352,599.08

Including depreciation, we always show a net loss in our operation, the object being to operate on a non-profit basis. There is deposited in a water and light fund, approximately $200,000 surplus, and the city had, up to three months ago, coal in storage to the amount of 21,400 tons which at the present value represents approximately an additional $150,000.

Rates were raised slightly two years ago in order to compensate for increased fuel cost, labor and other operating costs.

When the city bought the light and water plants in 1913, there was established a Utilities Commission consisting of three members, each holding office for six years with a new one appointed every two years. This Commission was entrusted with the entire management and operation of the utility plants, having entire control of them independent of the City Council. This system is still in effect. As a result the operation of our plants has been entirely free from politics because the Utility Commission is not subject to the changing political situations of the community.

The original president of the Utilities Commission, J. D. Lamont, is still president having served for 32 consecutive years. With him are C. H. Anderson, Vice-President, and F. W. Kline, Secretary, who likewise have served continuously since their original appointment. Appointments to the Commission are made by the Mayor and confirmed by the City Council.



Drawn for U. S. Pipe & Foundry Co. by the late R. F. Heinrich

While the first object of this Company continues to be production for the sinews of war, we are still making cast iron pressure pipe for vital public services such as water supply, gas and sewerage systems. We can supply your pipe requirements with reasonable promptness, subject to governmental regulations.

U.S.
cast iron
PIPE

U. S. PIPE & FOUNDRY CO.
General Offices: Burlington, N. J.
Plants and Sales Offices throughout the U. S. A.

Letters to the Editor

When Veterans Come Home

To the Editor of THE AMERICAN CITY:

The article by Phillips Bradley, "Veterans Are Coming Home—Now," in your January issue poses problems that need prompt attention by the municipal officials of every city in the land. It is my thought in this connection that a municipality should have as its function a properly set-up central office, to which a veteran or members of his family may come *at his own election*. It must be a voluntary seeking on the part of the veteran. It would be the function of this bureau to listen to the veteran's requests or requirements, to put them in logical order, and to fill in the chinks of local background available, for the most part only to local administration. When this has been done and a thorough understanding of the problem obtained, the veteran would be referred with a transmittal letter to any of the state or federal divisions that could help him. In event that his problem is acute and he needs immediate relief, it would be the function of this bureau to refer the veteran to the proper department of the city government and obtain for him through this department the essential relief or aid sought.

Always, any transactions of this bureau would be set forth in writing. A veteran would be required to follow through on the plan outlined and a systematic check-up would be conducted by the bureau to see that the veteran had at least carried out all his requirements. Then if no help or aid was forthcoming, this bureau would take it upon itself to inquire of the state or federal agencies involved as to why such and such a veteran or his family did not receive the aid, counsel, or whatever is involved, that he is entitled to.

It would appear, then, that by working from the middle towards both ends in this fashion, control could be exercised by the logical political unit which should do it—and that is the town or city. Let us not promise too much and do too little. And let us get organized to prevent, if we can, the cooling off that we witnessed after the last war—when, instead of welcoming the veteran with open arms, we wondered how we could shove him on to someone else and get rid of him.

If we start with the premise that nothing within reason is too good for the boys who are fighting this war—and it is a good premise—let us keep to it. To maintain their morale as fighters has been one of our chief concerns since Pearl Harbor. Their morale as citizens will be of similar importance after the fighting is over.

PERRY W. RODMAN
Comptroller
City of Bridgeport, Conn.

January 8, 1945.

Community Planning Literature

To the Editor of THE AMERICAN CITY:

In reference to the suggestions made in your December issue (page 87) on how best to spend $10 or $25 for community planning literature, I think the list given would make a very good start for a layman's small library on city planning matters. Personally, I would add two books of the Harvard City Planning Studies, "Urban Land Uses" and "Neighborhoods of Small Homes," published by the Harvard University Press, Cambridge, Mass.

I would also suggest that the library send for the pamphlets, "Modern Building Codes for Small Municipalities" issued by the National Board of Fire Underwriters, 85 John Street, New York 7, N. Y., and pamphlets on Building Codes, Zoning and City Planning issued by the Chamber of Commerce of the United States, Washington, D. C. Also "Post-War Cities" issued by the National Association of Real Estate Boards, Chicago, Ill. In addition to the booklet "Planning Profitable Neighborhoods" and the "Handbook on Urban Redevelopment" issued by the Federal Housing Administration, I would recommend "Successful Subdivisions" and "Low Rental Housing for Private Investment." All this pamphlet material can be secured either free or for a very few cents.

I am in full accord with the suggestion made that if $25 were available, $15 of it could be most profitably spent on a membership in one of the planning organizations such as the Urban Land Institute, American Society of Planning Officials, or American Planning and Civic Association. In my opinion a subscription to a magazine dealing with civic affairs such as THE AMERICAN CITY would be a must.

SEWARD H. MOTT
Director
Urban Land Institute
Washington, D. C.

Insurance Company Executives Urge Effective City Planning and Zoning

TO the Editor of THE AMERICAN CITY:

It is my firm conviction that an intelligent and adequate Planning Board is the one and only salvage for many of our American cities that find themselves with areas which have outlived their economic usefulness. I am visualizing a situation where the city will be intelligent enough to take advantage of and to follow the recommendations made by the Planning Board.

I have said many times in the past—and I firmly believe that it will be equally true in the future—that a mortgage loan officer must be concerned not only about the condition of the property and the neighborhood at the time of making a loan, but also as to what may happen to the general neighborhood picture in the future.

An adequate city plan and an effective zoning ordinance give the measure of confidence in the future of the security which is necessary for the making of a loan for a term of years, and I have no doubt that many institutions which have not heretofore loaned in urban areas will be ready and willing to make loans if and when the cities will protect the future of the neighborhood by intelligent planning and zoning.

In other words, do not ask the mortgagor to buy a pig in a poke. Let the city show him what it is planning to do with the neighborhood. You will find he will have a little more confidence and make loans in locations heretofore on the taboo list.

H. A. TROTTER
Secretary, Firemen's Insurance Company of Newark, N. J.

ANY trend which makes for a more adequate and more constructive use of land enhances the value of land generally and makes more desirable the use of improved land as mortgage security.

Hand in hand with future land values goes the necessity of proper planning. This is a much misunderstood word. Planning in the sense of city orderliness and mortgage lending is not a blueprint. It is not planning in the sense of regimentation. It is simply a pattern for the discouragement of future mistakes which, if made, will inevitably deteriorate mortgage security.

Through bitter experience we have all learned the importance of the suitability of an improvement to the land. Through bitter experience we have all learned the tremendous loss in values from obsolescence, accelerated by the deterioration of neighborhoods. Through bitter experience we have all learned that intelligent thought in municipal action through city planning in approving subdivisions and providing proper and adequate zoning might have saved thousands of homes from blight and prevented a multitude of foreclosures. . . .

If a mortgage lender will realize that close cooperation between municipal, state, and federal planning agencies and private capital will result eventually in strengthened mortgage security, then he will have gone a long way in stabilizing the value of mortgage security.

GEORGE S. VAN SCHAICK
Vice-President
New York Life Insurance Co.

(From an address, December 7, 1944, before the National Committee on Housing.)

HOW A B-G MIXER PROVIDES VERSATILITY

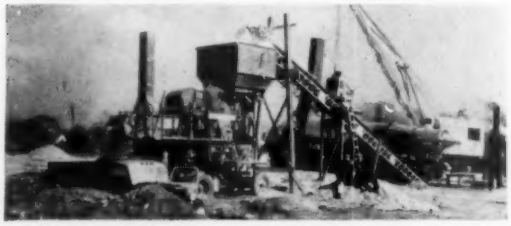
For Low-Cost Roads—
The B-G Mixer and Bucket Loader Form a Travel Plant

● High-type mix . . . intermediate mix . . . low-cost road mix! There is a combination of B-G units to make a plant set-up for producing bituminous mixtures under any specification, without employing unnecessary, costly units.

Just couple the Mixer to a B-G Bucket Loader and you have a travel plant that injects high quality into low-cost roads—an outfit that maintains a steady output of *plant-mixed* material mile after mile.

For the production of a wide range of intermediate bituminous mixes, team up the same B-G Mixer with a Dual Drum Dryer. To the accurate proportioning of the Mixer is now added drying to the previously-sized aggregate.

When high-type mixes are needed, add a B-G Gradation Control Unit to the same Mixer and Dryer. Now the plant gives you complete control of aggregate sizing, gradation and moisture control . . . meets most rigid specification requirements . . . yields a constant stream of absolutely uniform mix. For complete information on this versatile equipment, write the Barber-Greene Company, Aurora, Illinois.



For Intermediate Mixes—
The B-G Mixer Is Teamed Up With a Dual Drum Dryer

For High-Type Mixes—
To the Mixer and Dryer Is Added the B-G Gradation Unit

Barber-Greene B G *Constant Flow Equipment*

Planners and Architects Form New Organization

TO the professional organizations in the fields of architecture and planning—the American Institute of Architects and the American Institute of Planners—a third has been added, with a present membership of 69, under the comprehensive title of the American Society of Planners and Architects. At the first annual meeting, held in the Hotel Waldorf-Astoria, New York, on January 27, Joseph Hudnut, Dean of the Graduate School of Design of Harvard University, was elected president: George Howe, of Washington, D. C., vice-president; and Hugh Stubbins, Jr., of Cambridge, Mass., secretary-treasurer.

The constitution, as adopted, stresses the fact that the Society "will not be concerned with questions of professional procedure and etiquette, nor with architecture and city planning considered as business enterprises"—these being regarded as properly the concern of the professional societies already established. The progressive point of view which seems likely to dominate the new organization is indicated by the preamble to its constitution, the first paragraph of which reads:

"We believe that contemporary architecture and city and regional planning are social arts, inseparable from the collective life. The principal concern of these arts should be the development of a physical environment which will lift and sustain human happiness. Such an environment can be superior to any which has hitherto obtained, if it conforms wholly to human needs, and if it is an affirmation of human worth—not the needs and worth of the select few, but those of the many individuals who constitute the mass of the population."

Stressing the cooperation between the two professions which is a major objective of the American Society of Planners and Architects, President Hudnut pointed out at last month's meeting that:

"It is unthinkable that planners, however enraptured by the promises of science, can long continue an indifference to the interpretation of their subject matter in the language of structures set in space, or that architects, discovering the true dignity of their art in social serviceability, should long neglect its power to give meaning and importance to the human drama. Founded upon science the two arts of architecture and city planning have as their common objective the attainment and expression of an insight into human society beyond that accessible to science. Our useful patterns, moulded by the attitudes and movements of the collective life, are yet avenues through which the spiritual forces participate in the shaping of our environment and through that participation gain a continuing ascendancy in the life of cities. . . .

"The crisis of war brought into relief many deficiencies in the physical aspects of our cities, underlined the relation of these to economic and social factors, and generated everywhere the daring hope that planners and architects might someday use their science to assist a deeper contentment among the people of our country. That we should do this together seemed implicit in the nature of our two professions."

Public Discussion Series in Cincinnati

A series of five public forums, to be held monthly, for discussing the things which shape Cincinnati's future is being sponsored by the Citizens Planning Association, the Engineering Society of Cincinnati, and the Cincinnati Chapter, American Institute of Architects. The initiative has been taken by these groups in the belief that active participation by informed citizens is basic to the development of the best possible Comprehensive Plan for Metropolitan Cincinnati's future. Community planning, they hold, is a practical job in which all have a real stake and that without planning any community is bound to lose out, while with sound planning any community can better itself.

The general topics of the meetings are "What Makes Cincinnati Tick?", discussed in January and "More Things We Need to Know," with various subtopics, to be discussed from February to May.

Mayor Lapham Checks Days Ahead Against Work to Be Done

This unusual calendar in the office of Mayor Lapham has only two sets of figures, one under the heading "Days Gone," the other under the heading "Days to Go."

PHOTOGRAPH, COURTESY "WESTERN CITY"

MAYOR ROGER D. LAPHAM, of San Francisco, elected to office January 8, 1944, has committed himself to a single term of four years. He ran on a slogan of "Let's Get Things Done," and the calendar is a constant reminder of how many days are left for him to get things accomplished.

With his term one-fourth gone, Mayor Lapham's administration has already accomplished two of his major objectives—the consolidation of the municipal and the Market Street Railway into a single municipally owned street car system, and the financing of a series of needed public works projects, including $12,000,000 for sewer construction and repair. The calendar was made for Mayor Lapham by a friend in his former business, the American Hawaiian Steamship Co., Philip J. Vogel, who is a wood-worker by avocation. Here Ernest O. Meyer, Confidential Secretary to Mayor Lapham, checks up on the clock another Day Gone.

They have moved mountains

Between June 30, 1940 and the end of 1944, more than $52,000,000,000 worth of new factories, army camps, shipyards, naval bases and airports —war housing, community facilities and other essential civilian construction—had been completed under the program which has made America the arsenal of Democracy.

During the current year—and until the war ends—the war construction program will be continued on the scale required to meet the daily needs and the changing requirements of the battle fronts.

An even greater contribution can be made by the construction industry in building for peace than it has in building for war.

The key figures in the execution of construction are the general contractors—who have skill and experience in organizing, timing and getting things done.

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SKILL, INTEGRITY AND RESPONSIBILITY IN THE CONSTRUCTION OF BUILDINGS, HIGHWAYS, RAILROADS AND PUBLIC WORKS

Subdivision Control Through "Preferred Risk Communities"

By SIDNEY SCHULMAN*

EVERY day tracts of raw land in our metropolitan communities are being acquired by developers. Golf courses and estates—both within the city and on its suburban fringe—are being sold to builders or groups of builders. While those citizens and planners concerned with the problem of indiscriminate subdivision control, city planning, zoning, planned communities, the prevention of future blight, and municipal land policy are debating these subjects, it is later than they think.

The home builders are all set to embark upon the same wave of speculative building and selling of the era of the 1920's, although this time the minimum construction standards of the Federal Housing Administration, which will insure most of the mortgage loans, will prevent a repetition of the wholesale jerry-building of the past. However, only a few municipalities are legally or realistically equipped to cope with the problem of controlling subdivisions so as to create or preserve an ideal community.

Planning commissions, zoning ordinances and subdivision control are not in themselves enough. The powers granted by enabling legislation or ordinance must be adequately used and intelligently exercised. Too few communities have taken advantage of the powers now permitted under most state laws.

Subdivision control is varied in character. It may consist of requiring approval of a subdivision plot by the recorder of deeds or local governing bodies, or under some legislation the approval of the planning or zoning commissions may be required. There is nothing in these devices calculated to require the builder to develop planned communities, to take into consideration the natural contour of the land, the reservation of the land for present and future public use, the routing of traffic through main highways by-passing residential streets, and the many other factors which have been constantly urged and advanced by city planners.

To Help the High-Grade Builder

Even if the builders were aware of the benefits of planned communities, most of them would not be able to undertake such a development if it required varying existing street layouts. Often, as in Philadelphia, where streets are already laid out upon a gridiron plan, the difficulty of obtaining approval of the City Council to change the streets would be enough to deter anyone.

Further, the adoption of planning methods and subdivision control may deter the builder because at first glance they appear to increase costs. Since the home-building industry is highly competitive, the builder sincerely desiring to produce a better community feels he would be placed at a competitive disadvantage and therefore reacts against the extension of public controls.

The Federal Housing Administration, through its Land Planning Division, has given serious thought to the problems of subdivision and planning and has done much to educate the builders to the values of planning generally and improved site planning in particular, and has exercised considerable influence; but in its present advisory capacity cannot in itself solve the problem. Adherence to a master plan or the principles of a planned community are not a prerequisite to qualifying for FHA mortgage insurance. As long as the builders, rightly or wrongly, believe that planned subdivisions will place them at a competitive disadvantage, it is too much to expect that they would advocate any suggestions for compulsory adherence to approved planning principles.

As has been suggested by some, large-scale development may be the answer, but the majority of the builders in our metropolitan cities are not large-scale developers and they are the ones, whether we like it or not, who will build a considerable amount of the new housing within the next five years.

What then is the solution to this imminent problem? There is a method by which the builder can be made to adopt modern planning methods and subdivision controls. That method is to create the "Preferred Risk Community," under which builders who participate in the erection of such communities will be placed at a competitive advantage over builders who do not engage in such type of development. This objective is not as impossible of achievement as may first appear.

Lower Interest Rates and Longer Amortization

The home builders have been clamoring for a reduction in the interest rate to 3 or 3½ percent and an increase in the amortization period up to 40 or 50 years. An increase in the amortization period up to 40 years, even if not coupled with a reduction in the present rate of mortgage interest, would permit a substantial reduction in rents or carrying charges.

It is suggested as a *quid pro quo* either for the extension of the amortization period or the reduction of the interest rate that the National Housing Act be amended to provide new classifications of preferred mortgage risks, which would be restricted to areas which have been planned in cooperation with local planning and zoning commissions and the Land Use Division of the National Housing Agency. Standards more specifically defining such communities could be adopted by regulation.

TO AID SOUND SUBDIVISION DEVELOPMENT

This proposal for "preferred risk communities" is not deemed by its author to be the final solution of the problem of subdivision control. He does advocate it, however, as a stop-gap program which, with suitable enabling legislation, could be put into effect in a very short time. As such, he believes that it would encourage the creation of well-planned communities and help to save the nation from the blight of future slums which would be the inevitable result of lack of foresight in controlling the post-war building boom.

* EDITORIAL NOTE.—The author of this article has served as special counsel for the Pennsylvania State Board of Housing, the Special Committee of the Pennsylvania Legislature to Investigate Housing, and other housing groups. At present Mr. Schulman is Chief Rent Attorney for the Office of Price Administration, Philadelphia District, and a member of and counsel for several committees of the Philadelphia Housing Association and Citizens' Planning Council engaged in planning for post-war housing.

BIG SQUEEZE COMING UP

Cracking, breaking down under pressure of heavy war trucking . . . neglected unavoidably because of manpower shortages . . . America's roads are crying for immediate attention.

Meanwhile, the need for completing postwar highway plans to meet the demands of a new era of transportation is becoming increasingly imperative.

Result: There is a big squeeze coming up. To be ready, maintenance and postwar planning must both go forward at the same time! It's none too soon to consider your part in this situation.

That is why we suggest that you call in the Tarvia field man. He can offer you the benefit of Barrett's 40 years of successful experience in road construction, maintenance and repair. He can show you how to use Tarvia with local materials, to get the most miles of smooth, non-skid, long lasting pavement for the money available.

He can help you solve your postwar highway problems—now.

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*Reg. U. S. Pat. Off.

How the Plan Would Work

Areas, both within the corporate limits of the city and in its suburbs, which are deemed ripe for immediate development, would be designated on the city plans and modern subdivision methods adopted. Obsolete streets would be removed, new streets, highways and areas reserved for public use would be laid out. Transportation and utilities would have to be available or provided for, and not only should zoning restrictions include use districts, but restrictions of types of homes, setbacks, etc., should be incorporated. Private restrictive covenants in deds and agreements might also be required.

This area, when finally approved, will become a preferred risk community and builders in such communities who adhere to approved plans may obtain FHA mortgage financing on a 3½ percent interest basis with a 40-year amortization period. Builders with large holdings of land could be induced under this plan to submit their programs to the planning agencies for approval. If the area designated is large enough, other builders could acquire holdings within the area by purchase from private owners. If the private owners will not sell and existing holdings are at variance with the spirit of the plan, the zoning ordinances should be amended to provide for elimination by amortization of such non-conforming units over a short period of time.

Large-scale enterprise would immediately be attracted by the possibility of such a plan, but at the same time the small builder would not be frozen out. In private discussions concerning the possibility of success of such a plan, many objections had been made; among them that it would be impossible to interest investment capital in 3 or 3½ percent mortgages as long as the FHA is presently insuring 4½ percent mortgages. It is argued that institutional lenders who now finance most of the small builders at 4½ percent will have no incentive to invest in better-planned communities if the interest rate will be reduced.

Added Help from FHA

As an additional inducement for the reduction of interest rates the FHA might enlarge its guarantees to eliminate certificates of claim and to pay in full not only the principal of the mortgage, but all delinquent interest, taxes, counsel fees and other costs which accrue to the date of final foreclosure. Although this increase in benefits would be slight, it would be some inducement. However, even if the interest rate is not reduced, the extension of the amortization period to 35 or 40 years would give a competitive advantage.

It has also been argued that, as long as institutional lenders are now willing to pay builders a premium of from ½ to 2 percent in order to obtain 4½ percent insured mortgages, builders will have no incentive towards building preferred communities under which insured mortgages will bear only a 3½ percent interest rate. However, in my discussion with builders, I am convinced that generally they will not oppose the elimination of the bonus. Competition has been so keen among them that the builder has been compelled to take into consideration the bonus which he will receive and to adjust his prices accordingly. Also, as a practical matter, the FHA mortgage valuation section takes into consideration the bonus in determining the actual costs that must be met by the builder.

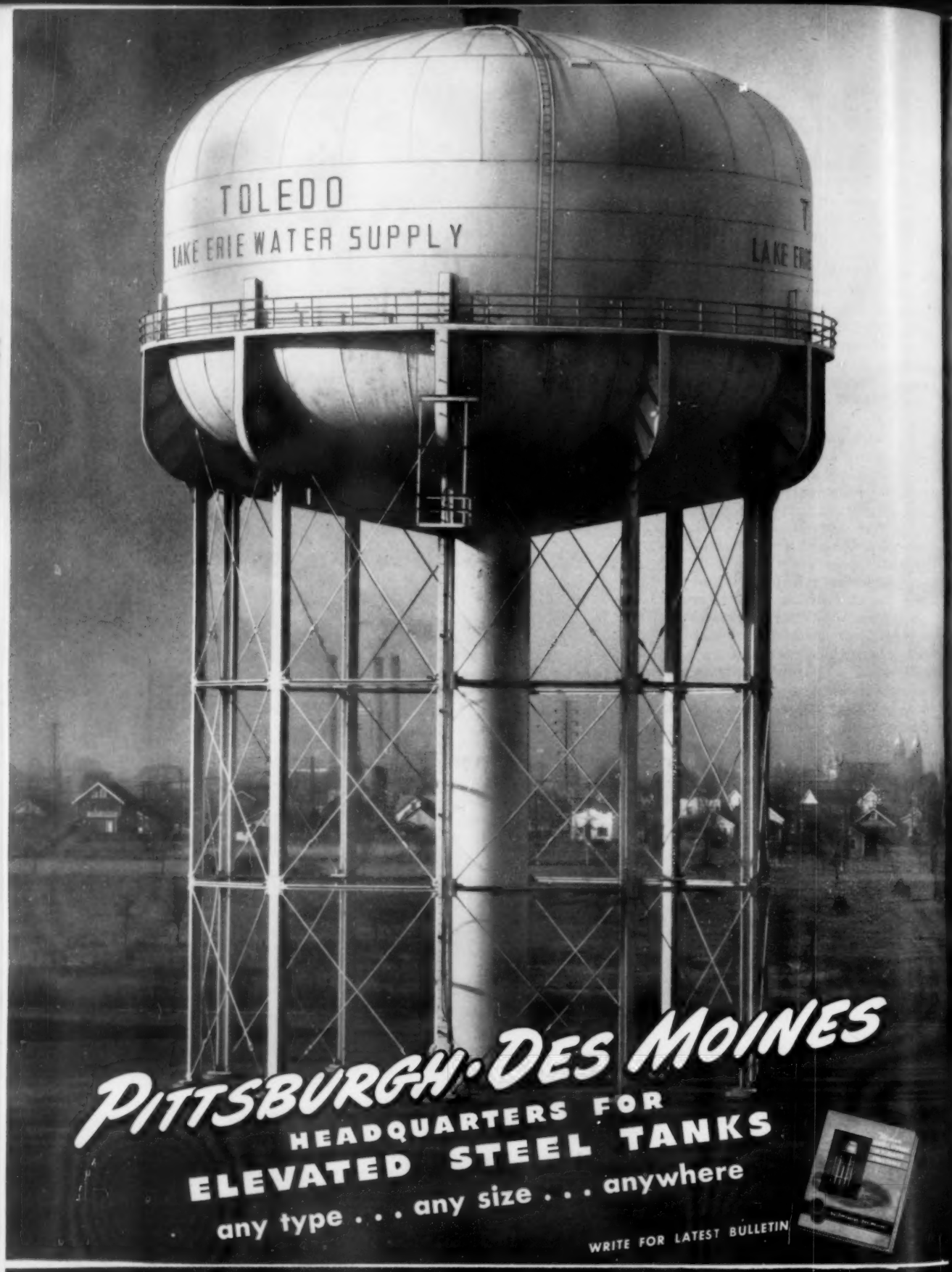
Other objections might be made that such a plan would encourage the movement away from the cities and would discriminate in favor of suburban development: that the extension of the amortization period, if once granted, would have to be extended to all builders whose construction qualified for FHA insurance under existing standards. These results need not necessarily follow, for there is still available in many cities large tracts within the corporate limits. In slum clearance projects the adoption of the superblock plan might qualify as a preferred risk community and thus reconstruction of decaying areas might be encouraged.

Recreational Innovations at Salem

A PERMANENT cement slide, planned and built under the direction of Park Commissioner Alfred Audet at Forest River Park, has proved one of the most popular innovations in the park system at Salem, Mass. In 1943, Salem improved and expanded its 26 public parks at a cost of $71,210. Picnic tables were erected, open air theatres were repaired and painted, additional trees and flower beds were planted, playground equipment was relocated, skating areas were enlarged, and additional benches and cement settees were installed.

As a consequence, Salem offers ample recreational space to its citizens. During the past summer a director of play with a staff made possible instruction in the arts and crafts, dramatics, storytelling, knitting, embroidery, sewing, and beadwork. Baseball, softball, squashball, and horseshoe teams were organized and tournaments conducted. A "Learn to Swim" program was carried out with the help of the Red Cross. Throughout the entire program, the recreational director and his staff had the help and cooperation of the citizens of Salem in making it a success, and in establishing it as a project for the whole community.

Cement Slide, Forest River Park, Salem, Mass.



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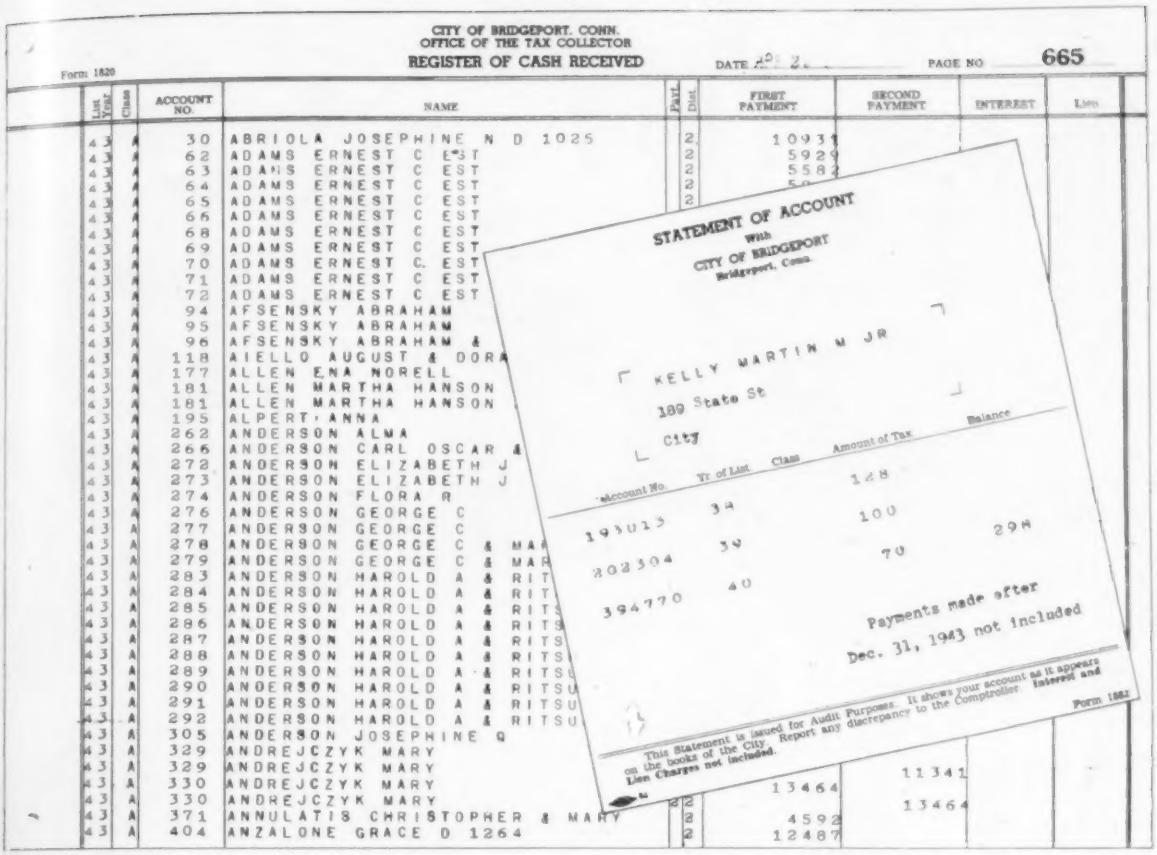

CITY OF BRIDGEPORT, CONN.
OFFICE OF THE TAX COLLECTOR
REGISTER OF CASH RECEIVED

Form 1820 — DATE 19[illegible] — PAGE NO. 665

	List Year	Class	Account No.	Name	Part Dist	First Payment	Second Payment	Interest	Lien
	43	A	30	ABRIOLA JOSEPHINE N D 1025	2	10931			
	43	A	62	ADAMS ERNEST C EST	2	5929			
	43	A	63	ADAMS ERNEST C EST	2	5582			
	43	A	64	ADAMS ERNEST C EST	2	50			
	43	A	65	ADAMS ERNEST C EST					
	43	A	66	ADAMS ERNEST C EST					
	43	A	68	ADAMS ERNEST C EST					
	43	A	69	ADAMS ERNEST C EST					
	43	A	70	ADAMS ERNEST C EST					
	43	A	71	ADAMS ERNEST C EST					
	43	A	72	ADAMS ERNEST C EST					
	43	A	94	AFSENSKY ABRAHAM					
	43	A	95	AFSENSKY ABRAHAM					
	43	A	96	AFSENSKY ABRAHAM &					
	43	A	118	AIELLO AUGUST & DORA					
	43	A	177	ALLEN ENA MORELL					
	43	A	181	ALLEN MARTHA HANSON					
	43	A	181	ALLEN MARTHA HANSON					
	43	A	195	ALPERT ANNA					
	43	A	262	ANDERSON ALMA					
	43	A	266	ANDERSON CARL OSCAR &					
	43	A	272	ANDERSON ELIZABETH J					
	43	A	273	ANDERSON ELIZABETH J					
	43	A	274	ANDERSON FLORA R					
	43	A	276	ANDERSON GEORGE C					
	43	A	277	ANDERSON GEORGE C					
	43	A	278	ANDERSON GEORGE C & MA					
	43	A	279	ANDERSON GEORGE C & MAR					
	43	A	283	ANDERSON HAROLD A & RIT					
	43	A	284	ANDERSON HAROLD A & RIT					
	43	A	285	ANDERSON HAROLD A & RITS					
	43	A	286	ANDERSON HAROLD A & RITS					
	43	A	287	ANDERSON HAROLD A & RITS					
	43	A	288	ANDERSON HAROLD A & RITS					
	43	A	289	ANDERSON HAROLD A & RITSU					
	43	A	290	ANDERSON HAROLD A & RITSU					
	43	A	291	ANDERSON HAROLD A & RITSU					
	43	A	292	ANDERSON HAROLD A & RITSU					
	43	A	305	ANDERSON JOSEPHINE Q					
	43	A	329	ANDREJCZYK MARY					
	43	A	329	ANDREJCZYK MARY					
	43	A	330	ANDREJCZYK MARY					
	43	A	330	ANDREJCZYK MARY	2	13464	11341		
	43	A	371	ANNULATIS CHRISTOPHER & MARY	2		13464		
	43	A	404	ANZALONE GRACE D 1264	2	4592			
					2	12487			

STATEMENT OF ACCOUNT
With
CITY OF BRIDGEPORT
Bridgeport, Conn.

KELLY MARTIN M JR
189 State St
City

Account No.	Yr of List	Class	Amount of Tax	Balance
			148	
193013	39		100	
202304	39		70	298
394770	40			

Payments made after Dec. 31, 1943 not included

This Statement is issued for Audit Purposes. It shows your account as it appears on the books of the City. Report any discrepancy to the Comptroller. Interest and Lien Charges not included.

Form 1882

Records of tax payments in Brdigeport are punched into cards which also record the valuation, name, and account number of payer and the tax payment due. Tabulating machines completely control records of payments against cash.

Collecting Taxes Through Punched Holes

By PERRY W. RODMAN
City Comptroller
Bridgeport, Conn.

OUR procedure on current year taxes is the most important single tabulating-machine application from the standpoint of the city's financial well-being. The punched card is the beginning of this procedure and the cash sheet shown here is the end.

The completed assessment roll is forwarded to the Comptroller's Office and a plain card is set up. The tax rate is, of course, a constant factor, so that we deal with the assessed value, the name, and account number of the individual. This information is punched into the card direct by the multiplying unit and the amount is extended, showing under "taxable amount." The card is taken off. This is necessary because our tax payments are divided into two units. There is a further complication in our tax set-up, but it is not peculiar to Bridgeport: we have the first and second taxing districts. On the striped card, column 49 is used to show that this is the second-payment card. Once these cards are set up, a proof run is made tabulating for amount only, and this proof is used to check the accuracy of the punching and to be sure that the amounts stated on the cards total to the property tax control figure. There are several different methods whereby such a control can be set up, but in Bridgeport we use a control by letter. This gives us 26 individual controls to work to and is of value when a huge volume of figures has to be handled.

When the accuracy of our punching has been proved, the cards go to the Tax Collector's office and are pulled from their files as payment is made. The cards are run on tabulating machines at the end of a day and the total on the cards must equal the total of cash received. The cards are then returned to the Comptroller's Office with the notation as to the amounts involved on each group of cards, and a list printed. Proof of the accuracy of the total is then made directly with the bank deposit, a duplicate of which had already been forwarded to the Comptroller's Office; so that, for instance, we know that on October 13, 1944, $6,951.38 was deposited in the bank by the Tax Collector. It is therefore apparent that this procedure rounds out a complete system of check and proof.

Delinquent Follow-Up

After September 30 of any year, open items of taxes unpaid in the files are delinquent. These cards are removed, a listing is made, and this listing is

Help REDUCE the High Accident Toll!

make SAFE roads and streets your number 1 objective

In spite of war speed restrictions and less traffic, motor vehicle accidents reached the appalling toll of 23,400 deaths and 800,000 injuries in 1943. Reducing these terrifying figures is a responsibility that must be shouldered. Make it your NO. 1 objective!

While many of the accidents were due to other reasons . . . a high percentage were caused either by some specific defect in the roadway itself or by unfavorable surface conditions. Wet, muddy, snowy or icy roads and streets alone are said to be responsible for one out of every five or six fatalities!

Wider, skid-proof surfaces, flatter slopes and ditches, increased sight distances on curves and hills, more intense maintenance . . . these are essential to accident-proof roads and streets. And modern, cost-cutting equipment is essential to accomplish these objectives on a limited budget! Figure on fast, powerful Allis-Chalmers 2-Cycle Diesel Motor Graders and Tractors to get the most done for the least money.

Watch 2-Cycle... the Modern Diesel

ALLIS-CHALMERS

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Fight to Victory with War Bonds

available for follow-up, checking out, personal calls, sheriff's attention, or whatever may be necessary in order to collect the delinquent taxes. It also provides the negative accounting base. We are not interested in the taxes collected. We are interested in those *uncollected*.

Interest is figured to the date of actual payment of arrears. It is impossible to figure the interest and punch it in the card until payment is actually made. It is possible, however, to figure the lien which is a fixed amount, and that is punched into the card immediately upon its application. The cards representing unpaid accounts are then filed and when payment is actually made, the interest is punched into the card so that the tabulating run will account for the principal amount of the tax, the interest accrued to the date of payment, and the lien charge. Certificates of error and abatement adjustments are covered by specially designed cards punched to give the information.

The practical result of using tabulating accounting machines has been to cut out much personnel cost while speeding up immeasurably the production of facts, accuracy, ease of audit procedure, efficient follow up of arrears, ability to absorb peak business periods without much additional effort—and the production of beautiful records.

Bringing Interregional Thoroughfares to the Hearts of the Cities

(*Concluded from page* 60)

Standards of Design

Aside from its recognition of urban highway problems, the Interregional Committee has made a valuable contribution to urban highway planning technique by developing certain standards of design for the kind of highway under discussion. The Committee recognizes the fact that the cure for urban highway ills does not lie in applying palliative measures, but rather in performing a surgical operation. Briefly, some of the more important recommendations applying to urban highways are as follows:

(1) *Condition of Access*

Access should be permitted only at designated points. No crossings of railways or other streets shall be made at grade.

(2) *Location*

Between control points, the location shall be as direct as feasible and shall conform to topography and property improvements.

(3) *Elevation and Depression*

A depressed highway, if financially feasible, is generally preferred to elevation.

(4) *Service Streets*

Wherever necessary for the service of property, local service streets shall be provided on each side of the highway.

(5) *Alignment*

Under urban conditions, a designed speed higher than 50 miles per hour would usually be impracticable. The desirable maximum horizontal curvature shall not exceed 7 degrees.

(6) *Number and Width of Traffic Lanes and Median Strips*

Highways carrying an average daily traffic of 20,000 or more vehicles shall provide three 12-foot lanes in each direction, separated by a raised median strip, at least 4 feet wide. For average daily traffic of less than 20,000, two 12-foot lanes in each direction should be sufficient.

(7) *Width of Right-of-Way*

This will vary in accordance with conditions, but must be sufficient to permit the construction of all necessary facilities in accordance with the established standards. Ordinarily, for a 6-lane depressed highway with side service roads and landscape side-slopes, a minimum of 280 feet would be required.

To Prevent Urban Disintegration

No one can foresee how much further the decentralization of large cities will take place after the war, but it is probable that the process will continue at an accelerated pace, unless our central cities are replanned and redeveloped on a sufficiently large scale to make them once more attractive for people to live in. The construction of new highways, in the past, has made the spread of population possible and it has encouraged the stringing out of development along these thoroughfares. If additional modern highways are built, conforming to the standards set out above, it will be easier than ever for people to escape the city by moving outward. This process might be controlled in some measure by a judicious limitation of access to the interregional highway from points beyond the built-up sections of the city, but until some over-all control of development of the entire urban area is developed and put into effect, our cities will continue to disintegrate.

No system of urban interregional routes leading to and through the central business districts will adequately fulfill their function unless provisions are made for terminal facilities for the motor vehicles having occasion to transact business within that area. This matter is an integral part of urban highway planning. Consideration should also be given to the provision of mass transportation facilities as a basic part of such highways. For an excellent discussion of this subject, attention is called to the paper recently given by Charles Gordon, Managing Director of the American Transit Association, at a meeting of the Conference Committee on Urban Problems of the United States Chamber of Commerce.

U. S. Supreme Court on Housing

THE Supreme Court of the United States handed down a decision on January 2 in two suits in which the constitutionality of the United States Housing Act was sustained, and property belonging to the Federal Public Housing Authority declared to be exempt from state and local taxation. As explained by David L. Krooth, General Counsel, FPHA:

"One of these cases was an appeal by the Federal Public Housing Authority from a decision of the Supreme Court of Ohio, in which that court held that the Laurel Homes Housing Project (PWA) in Cincinnati, was subject to State taxation in that the United States Housing Act authorizing the administration of the project was not within the delegated powers of the Federal Constitution. The other case was an appeal by the City of Cleveland and the County of Cuyahoga, from a decision of a three-judge court of the United States District for the Northern District of Ohio, involving several PWA projects in the City of Cleveland. The District Court held that the United States Housing Act was constitutional and that Congress had the power to declare the property of the Federal Public Housing Authority exempt from taxation.

"Since both cases involved the same points of substantiative law, the court rendered one opinion dealing with both cases. The opinion reverses the decision of the Supreme Court of Ohio and declares the United States Housing Act to be within the powers of Congress and that the Congress had power to exempt the property from taxation. The opinion also sustains the decision of the United States District Court in holding that the United States Housing Act was constitutional and that property administered thereunder is exempt from taxes."

Deepwell Pump* Development Shown in *New* Bulletin

BYRON JACKSON
DEEPWELL PUMPS
TYPE B
Designed for wells of larger diameter where relatively high heads and pressures are involved. For identical capacities and speeds, the Type "B" Pump is greater in diameter than other types of pumps shown herein. Performance characteristics are such as to permit use of a minimum number of stages.
SPECIFICATIONS
Bowls. Close grained cast iron containing a small percentage of nickel to increase density. Flanged, accurately machined and bolted together. Automatic stuffing box and drain ports incorporated within top bowl.
Impellers. Bronze, enclosed type, machined with spiral grooves to prevent sand locking.
Shaft. Rustless steel, extra heavy, turned and ground.
Bearings. Top and bottom bowls are provided with extra long bronze bearings, intermediate bowls are bronze bushed. A chamber packed with non-soluble hydraulic grease surrounds the bottom bowl bearing and a bronze sand cap prevents entrance of sand to this bearing.
TYPE "B" PUMP SIZES AND CAPACITIES
TYPE "B" PUMP SIZES AND CAPACITIES

*Originated by Byron Jackson in 1901, continuous development of basic principles has evolved a line of unusually dependable pumping equipment for municipal water supply procured from deep wells.

Three types provide over a hundred impeller designs of differing hydraulic characteristics to meet the requirements of most given conditions.

Bulletin illustrates and describes construction of all types, gives performance charts and tables, and shows the complete line of discharge heads and drivers available.

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More Cities Report Plans for Post-War Municipal Improvements

In fourteen issues between November 1942 and May 1944, THE AMERICAN CITY published replies from 541 municipalities of over 10,000 population to a questionnaire regarding their plans for post-war public works and other improvements to be undertaken when materials and manpower become available.

To meet numerous requests for further information of this character, a second poll is being taken of the 536 places in this population group that were apparently not ready to respond to the first inquiry. This new questionnaire—slightly different in wording from the earlier one—asks these six questions:

1. If your city has begun to plan for public works or other municipal improvements to be undertaken when materials and manpower are available, what are the principal types of projects contemplated and approximate cost of same?

2. Which of these plans have reached the "blue-print" stage?

3. What responsibilities and powers does your City Planning Commission have as to post-war planning?

4. Has your city adopted a "capital budget"?

5. If your city is setting aside any reserves, in war bonds or otherwise, for post-war public works, what is the present total of such reserves?

6. Is your community planning a War Memorial? If so, what type?

Replies to these six questions from 40 municipalities were tabulated in the January 1945 issue. Thirty-three additional replies are here listed.

Where numbers 2, 4, 5, or 6 are omitted, this indicates either that the reply was in the negative or that no definite action has yet been taken.

Akron, Ohio

M. L. DAVIS, Director of Public Service:

1. Enlargement of sewage disposal plant ($5,000,000); street improvement including storm and sanitary sewers ($9,500,000); airport improvements ($4,500,000); schools ($5,700,000); auditorium and art center ($1,900,000).
2. Street improvements and schools—plans completed. Just starting plans for airport improvements, and plans in preparation for sewage disposal plant.
3. Recommendation only.

Albany, N. Y.

FRANK S. HARRIS, Mayor:

1. Repaving and resurfacing 18 streets ($824,000); heavy traffic line from Hudson River Bridge to North City Line paralleling Hudson River ($1,200,000).
2. All street repaving and resurfacing projects are in blue-print stage.
3. None.
6. New York State proposes a war memorial in Albany in type of public building.

Barberton, Ohio

ROY K. DOBBS, Mayor:

1. Highways, roads and streets ($543,200); sewer, water and sanitation facilities ($826,930); public buildings ($380,000).
2. Plans for public buildings completed. Partial blueprints for other projects proposed.
3. Very little. Most planning is done by the Engineering Department under the direction of the Administration.
6. Honor Roll, whose cost of $4,890 was paid for by donations.

Batavia, N. Y.

A. O. WEST, City Engineer:

1. Street pavements ($145,552); sewage treatment plant ($688,900); schools ($1,170,000); airport ($500,000).
2. Street pavements and sewage treatment plant.
3. Recommendations to City Council.

Beaver Falls, Pa.

D. F. HARVEY, City Engineer:

1. Street improvement ($600,000); storm and sanitary sewers ($400,000).
2. Street improvement.
4. None established. Have a fund of $50,000 for post-war work.

Belleville, N. J.

WILLIAM H. WILLIAMS, Mayor:

1. River walls; streets; recreation center; junior high school; addition to municipal building.
2. Streets.
4. Allotment made in annual budget as part payment for new jobs.
5. $300,000 cash invested in War Bonds for post-war projects.
6. Possibly a recreation center.

Boone, Iowa

F. W. GANOE, Mayor:

1. Extension of sewer and water mains; construction of a new additional water tank for pressure and supply. New airfield. Repair of paving and new paving for 10 miles. Estimated cost—$500,000.
2. Water tank, airport, part of paving.
3. No Planning Commission.
5. Approximately $100,000.

Biloxi, Miss.

C. A. DELACRUZ, Mayor:

1. Streets and sewers; schools.
2. Schools.
6. Yes. Undertaken through our Chamber of Commerce.

Brainerd, Minn.

R. T. CAMPBELL, City Engineer:

1. The city has not adopted an official post-war plan, but is considering various proposals advanced by citizens through the Brainerd Civic Association. Among the most urgent of these are: Garbage incinerator, water and light warehouse; filter plant addition; garage and shop for city; park improvements; storm sewers and street pavements.
6. Yes. Undecided as to type of building.

Bridgeton, N. J.

BERTRAM R. B. AITKEN, Mayor:

1. Community Hall and concrete athletic stadium on Memorial Field in the rear of City Hall; city incinerator; enlargement of sewage disposal plant; addition to the municipal high school or a new building.
2. Plans being drawn for high school addition or new building; plans in preparation for community center and athletic stadium.
3. Formulating and suggesting improvements; reporting to the governing body with application for funds for preparation of blue-prints.
4. No capital budget, but money earmarked for post-war projects now invested in War Bonds.
5. See above.
6. The Community Hall Center and athletic stadium mentioned above constitute Bridgeton's War Memorial.

Campbell, Ohio

THOMAS ROMANICK, City Engineer:

1. Extensions to sewer and water lines; pavement and sidewalk construction; new waterworks; new city building.
2. Pavement, sewer and water lines.
6. Yes. Type undecided.

Claremont, N. H.

J. L. AINSWORTH, Selectman:

1. Highways and streets—cost unknown.
3. Advisory.
5. $52,000 for equipment only.
6. Yes, through the Junior Chamber of Commerce.

Danville, Ill.

DON H. WILSON, Mayor:

1. City building; boulevard lighting; paving.
2. Plan will be "blue-print" stage in 2-3 months.
3. City Council acts as Planning Commission.

Elizabeth City, N. C.

J. B. FLORA, Mayor:

1. Sewage disposal plant; bridges; streets and sidewalk paving; athletic field; airport; improvements to storm sewers; fire alarm system.
2. Bridges and streets and sidewalk.
3. Advisory.
6. Nothing definite.

Garden City, N. Y.

A. H. ROGERS, Superintendent of Public Works:

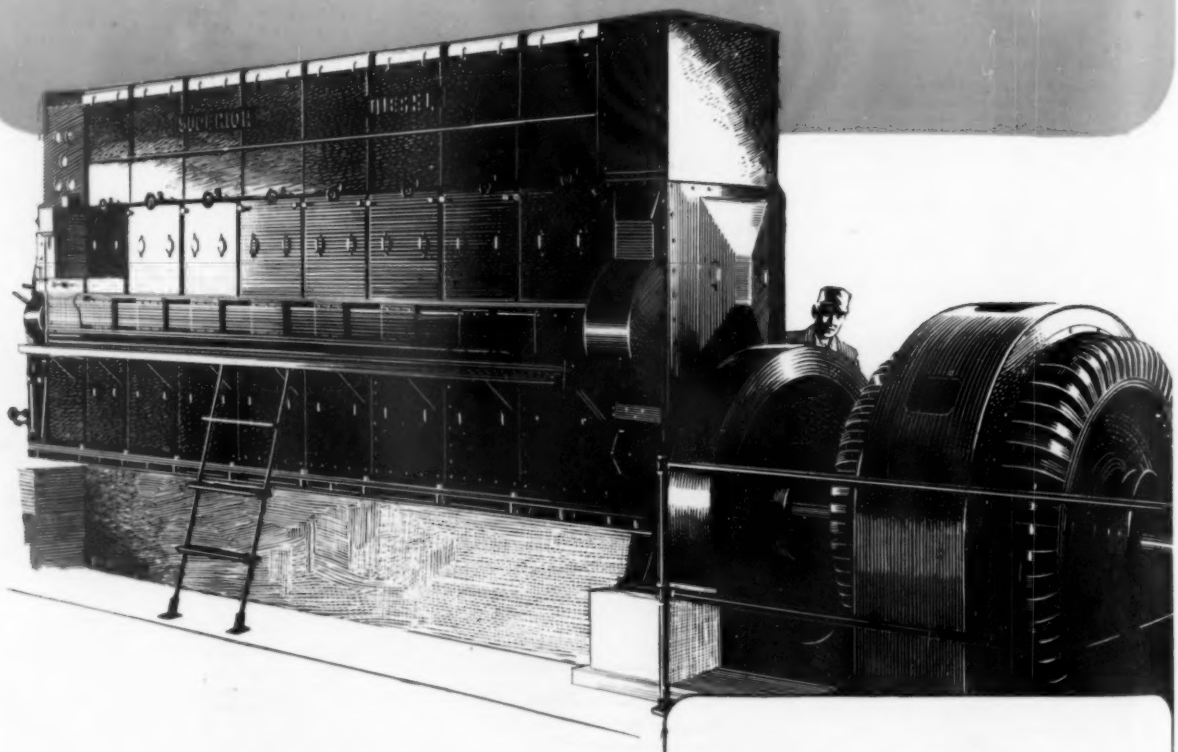
1. Service building at water pumping station ($80,000); alterations to village hall ($31,000); reconstruction of water pumping station ($60,000); storm drainage construction ($51,000); alterations to yard building ($25,000).
2. Preliminary plans completed for all projects; final plans in preparation.
3. Advisory powers: primarily, recommending areas to be acquired for parks, playgrounds, parking fields, street widening and similar improvements.
5. $75,000 cash reserve for service building at water pumping station.
6. Yes. Under consideration.

Hillside, N. J.

HOWARD J. BLOY, Township Clerk:

1. Municipal building; library; sanitary sewer trunk repairs; fire alarm system.
6. Yes. Type undecided, to be raised by public subscription.

Industry can Trust the Time Honored Dependability of *Superior* Diesel



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SUPERIOR DIESELS • STATIONARY, 28 to 1325 H. P.
MARINE, 28 to 1325 H. P. • GENERATOR SETS, 20 to 928 kw.

Medford, Mass. (Correction)

GILBERT ROBINSON, Chairman of Planning Board:

1. Memorial public library ($130,000); incinerator ($150,000); central fire station and fire alarm headquarters building ($150,000); police station ($125,000); memorial high school stadium ($135,000); covering open drains and brooks, surface water drainage, sewer and water main construction ($125,000); cemetery development ($100,000); sidewalk and street construction $400,000).
3. Preparation of studies, reports and recommendations.
4. No capital budget has been approved. Present surplus account is approximately $400,000.
6. Memorial central library and high school stadium.

Mt. Vernon, Ohio

HARRY C. BENNINGTON, Mayor:

1. New city hall ($50,000); swimming pool ($20,000); widening of some streets and a new bridge.
3. Suggestive only.
5. $10,000.
6. Not as yet.

Muskegon Heights, Mich.

F. P. ROCKENBACH, Mayor:

1. Expansion of sewage treatment plant ($250,000); street paving ($159,600); storm sewers ($290,804).
3. Plans are submitted for their consideration.
5. $20,000.
6. Community building.

Newark, Ohio

JAMES E. NEIGHBOR, Mayor:

1. Sewers and sewage treatment plant ($870,000); waterworks, additional reservoir and force mains ($100,000); light plant and generator ($85,000); new city hall and site ($250,000); new public library ($100,000); rearranging and improving street lighting ($190,000).
2. Sewers
3. Those designated by the laws of the State of Ohio.

New Bern, N. C.

L. C. LAWRENCE, Mayor:

1. New electric plant ($750,000); incinerator ($80,000); sewerage extension ($70,000); street program ($150,000); two bridges ($700,000 within city limits) to be built by State Highway Department.
2. Electric plant, sewers, streets, bridges.
3. Advisory.
5. $100,000.
6. Yes. Under discussion.

Oswego, N. Y.

CHARLES H. SNYDER, City Engineer:

1. Sewer interceptor, sanitary and storm sewers, water mains ($591,929); road and bridge repair ($180,780); park improvements ($212,011); street paving ($466,967).
2. Sewer interceptor plans completed. Preliminary plans for bridge.

Perth Amboy, N. J.

GEORGE OTLOWSKI, Administrative Assistant:

1. Sanitary, storm and relief sewers ($440,000); new water supply transmission lines ($450,000); street improvements ($860,000); boat basin; improvements building ($20,000); parking extension ($400,000); park improvements ($200,000); improved water distribution system ($175,000); city lighting plant and additions, with extended lighting facilities ($435,000).
2. New water supply transmission lines.
3. Outlining and recommending such projects as they see fit.
6. We already have a large plaque bearing the names of servicemen.

Roselle, N. J.

MORTON A. LEBER, City Engineer:

1. Trunk sewer to disposal plant ($100,000); sanitary sewer ($7,500); highway ($20,000); drainage ($50,000).

Saugus, Mass.

CARL E. CHAPMAN, Assistant Superintendent, Public Works Department:

1. Sewers; drains; roads; water; sidewalk. Preliminary work only.
3. Town Planning Board must submit to Town Meeting any suggested town projects.
5. $2,500 in war bonds for post-war rehabilitation.

Utica, N. Y.

CHARLES E. MERRITT, City Engineer:

1. Sewage disposal plant ($1,365,000); pavement reconstruction ($450,000); sanitary sewer ($595,000); storm sewer ($126,000); culvert reconstruction ($295,000); bridges ($40,000); schools ($1,000,000).

Vallejo, Calif.

H. W. MITCHELL, City Clerk:

1. Municipal public works; sewage disposal; storm drains; additions to public buildings.
3. Board of Planning Commissioners, created by ordinance. Organized in November, 1944, and preparing to carry out proposals now.
5. $25,000 appropriated from current budget, for Board use in organization and planning to June 30, 1945. Next year reserve will be started if finances permit.

Waukegan, Ill.

FRANK G. WALLIN, Mayor:

1. City Engineer H. B. Bleck has submitted to the Mayor and City Council a suggested list of improvements which might be constructed over a considerable period of years. This includes the following types of projects: water works construction ($971,584); sewers, drainage, bridges, culverts, sewage disposal $2,022,700); street pavement construction ($3,732,400); street lighting and traffic signals ($288,800); public buildings, harbor, airport, and track elevation ($2,663,500).
5. City is about to set up a Planning Commission.

Weehawken, N. J.

JOHN G. MEISTER, Mayor:

1. Sewage disposal plant ($75,000); garage and storage room ($15,000); street improvements ($60,000).
2. Sewage disposal plant, garage and storage room, and partial street improvement.

Westfield, Mass.

ARTHUR B. LONG, Mayor:

1. We are just starting to plan.
3. Complete.
5. $25,000.

White Plains, N. Y.

CHAUNCEY T. S. FISH, Mayor:

1. Lateral sanitary sewers, water mains, storm water drains, relaying sidewalks and curbs; additions to city buildings; underground fire alarm system; playground developments ($3,000,000).
2. Certain of proposed sanitary sewer and water main projects.
3. Post-war Planning Commission under direction of Executive Secretary. Power to recommend from studies of the city at large.
5. No. Establishing reserves to purchase equipment.

Whiting, Ind.

JAMES S. MCCARTHY, City Attorney:

1. Sewage disposal plant and system; activated sludge. ($1,000,000)
2. The plans for the above have been completed and approved by the State Board of Health.
5. Approximately $85,000.
6. Yes, but undecided as to type.

Xenia, Ohio

G. D. ACKERMAN, City Manager:

1. Sewage treatment plant; incinerator; extensions to sanitary sewer and water main; city garage and street improvements.
2. Sewage treatment plant and incinerator.
6. Subject under discussion.

Are your Municipal Postwar Improvement Plans Ready?

Proper planning for postwar public works involves more than the listing of essential improvements.

Financing must be provided.

Land and easements must be secured

Legal matters must be settled

And

WORKING PLANS MUST BE PREPARED

Any one of these details left uncompleted will delay actual construction unnecessarily

With *All* of these details out of the way *Now*, postwar construction can start without delay when the war ends.

Whether your municipality plans new paving for business or residence streets, a new school, hospital, waterworks or sewage treatment plant, working blueprints prepared in advance will save time after V-Day. Even more important, this will avoid the costly mistakes that are made when projects are planned in a hurry

First Win the War, but let's get ready to Win the Peace

LEAGUE OF WISCONSIN MUNICIPALITIES

One of several effective presentations of post-war planning needs and opportunities which the League of Wisconsin Municipalities has been running in its monthly magazine, The Municipality.

Keeping an Eye on TAXES

through Remington Rand Punched-Card Accounting

The City of BOSTON has simplified and speeded tax-collection accounting and saved taxpayers thousands of dollars annually.

In 1938 the City Collector installed Remington Rand Punched-Card Accounting and Tabulating Machines to control a 97 million dollar tax collection.

He reports, in part: "The chief increase in efficiency was in the accuracy with which the collection books could be balanced mechanically under the punched-card plan. . . . There is no doubt about the popularity of the punched-card method, both with every member of the Collection Department for its elimination of the annual overtime obligation; and with the city administration for its proved accuracy and pre-auditing features, as well as its saving of 33 1/3% in clerical costs."

The unequalled versatility, capacity, speed, and accuracy of Remington Rand Punched-Card equipment make it possible for both small and large communities to handle their entire range of accounting and statistical records on the same mechanical equipment, thereby taking full advantage of the efficiency and economy which this modern system provides. Details of the City of Boston operation are covered in Certified Report No. 4406-8B, which is available, free, to interested public officials by writing to our branch office nearest you, or direct to Remington Rand Inc., Tabulating Machines Division, New York 10, N. Y.

Remington Rand

PUNCHED-CARD ACCOUNTING

* The **HOLE** **MARK** of a System
. . . the Symbol *of Accuracy*

Write for Bulletin M-3—"Complete Tax Accounting the Punched-Card Way" —it covers the six phases of taxes from assessments to delinquents. It's FREE!

• KWIK-FAX •

ONLY REMINGTON RAND TABULATORS CAN PRINT ONE HUNDRED COLUMNS OF LETTERS AND FIGURES ON A SINGLE LINE

An accounting report is only as valuable as the details it provides. The 100-column capacity of a Remington Rand Alphabetical Tabulator — 12 more than any other punched-card system — gives plenty of "elbow room" for these details. In addition, these 100 columns can carry either alphabetical or numerical information — another exclusive Remington Rand feature that adds 57 columns of alphabetical capacity to each record and permits locating alphabetical information in any position on the card. The greater flexibility, capacity, accuracy, and speed of Remington Rand Punched-Card equipment make it preferred by keen-minded organizations everywhere.

ALFRED BETTMAN
1873-1945

IN the passing of Alfred Bettman, of Cincinnati, on January 21, the professions of law and of city and regional planning have lost one of their ablest and most public-spirited members.

Mr. Bettman's death occurred on a Cincinnati-bound train, on which he was returning from a meeting of the American Institute of Planners, held the previous day in New York. Earlier in the same week he had represented the Institute at a hearing in Washington of the Senate Subcommittee on Housing and Urban Redevelopment.

As many of THE AMERICAN CITY's readers know, Mr. Bettman was chairman of the City Planning Commission of Cincinnati, vice-chairman of the Regional Planning Commission of Hamilton County, Ohio, a past president of the American Society of Planning Officials, and consultant or director of numerous organizations and public agencies concerned with zoning, planning, and better housing. To his sound advice and unselfish civic service may be credited much of the progress of zoning and planning law during the last quarter-century.

Michigan Leads in Local Post-War Public Works Planning

Applications for planning-aid to the number of 2,741, covering projects with an estimated construction cost of $472,241,866, have been received (to January 1, 1945) by the Michigan Planning Commission from municipal and county governmental units in every one of the state's 83 counties. These applications have resulted from the appropriation by Act 57 of the 1944 Special Session of the Michigan Legislature of $5,000,000 for public works planning-aid to be made available to local governmental units on a 50-50 matching basis.

According to a statement by Don C. Weeks, Director of the Michigan Planning Commission, with headquarters in Lansing, formal grants as of December 20, 1944, totaled $2,630,099, for projects with estimated construction cost of $239,493,220. Director Week's statement points out that:

"It is sound policy for government to adjust and prepare its post-war operations so that it offers the minimum of hindrances to the prompt return of full civilian production and maximum private employment. The Planning Commission is assembling and studying material on this subject so that helpful recommendations may be made for a sound policy for public works construction timing in Michigan."

Meeting Unusual Water Supply Problems

(*Concluded from page 75*)

Fourth, the urgency of developing an unproved deep well source did not permit us sufficient time to determine its probable capacity.

Fifth, educating a population accustomed to an unmetered water supply with an average consumption rate of 300 gallons per capita per day to a more conservative use of water.

However, with all of this behind us, the lake now full of water assuring a three-year supply, additions completed at the filtration plant and with an auxiliary deep well water source available for emergencies, we can face our heaviest water demands confidently.

Acknowledgment is due the splendid cooperation and assistance of the Oklahoma State Department of Health under the direction of H. J. Darcey, Chief Engineer, and his staff. Outstanding work has been performed during these emergency conditions by the Plant Superintendent, Robert Smith, and the Water Superintendent, R. W. Bean. But the one thing that has been helpful above all others has been the tolerance of the water consumers and the administrative officials both in Lawton and at Fort Sill.

City Manager Appointments

GEORGE E. BEAN, city manager of Escanaba, Mich., since August 1936, has accepted the post of city manager for Pontiac, effective January 16. He succeeds J. M. Mudie.

JOHN C. EWEN has been made city manager of Eastport, Me., as successor to Benjamin Ela.

F. R. HOGUE, who served as city manager of Astabula, Ohio, from 1929 to 1933, and who has been city solicitor since that time, has been appointed acting city manager to succeed W. H. Flower who resigned.

DAVID KING, manager of Harbor Springs, Mich., from February 1937 to December 1940, became the first city manager of Berkeley, Mich., on January 15.

JACK MAYNARD, city manager of Covington, Ky., from January 1940 to January 1944, has been appointed city manager of Milford, Del., to fill a post that has been vacant for several months.

J. C. MORRIS, former director of public works, Warwick County, Va., became first county manager on January 1.

CLAUDE E. PEAVY, who has been serving as lieutenant in the Coast Guard since November 1942, is back as city manager of Bakersfield, Calif. Vance Van Riper, who has been acting manager, has returned to his former post as city clerk.

M. DEANE SEEGER, former city comptroller of Bellingham, Wash., has been appointed first city manager of Eugene, Ore.

LAURENT THAUVETTE, civil engineer, has been appointed city manager of Malartic, Quebec, to succeed Armand Dumas who has returned to private engineering practice.

MOSES WOODS has replaced E. L. Wilson as city manager of Excelsior Springs, Mo.

Correction

W. C. BALLARD continues as town manager of Bedford, Va.—a position he has held for the last 14 years. J. M. Bower is town engineer, and not city manager as erroneously reported last month.

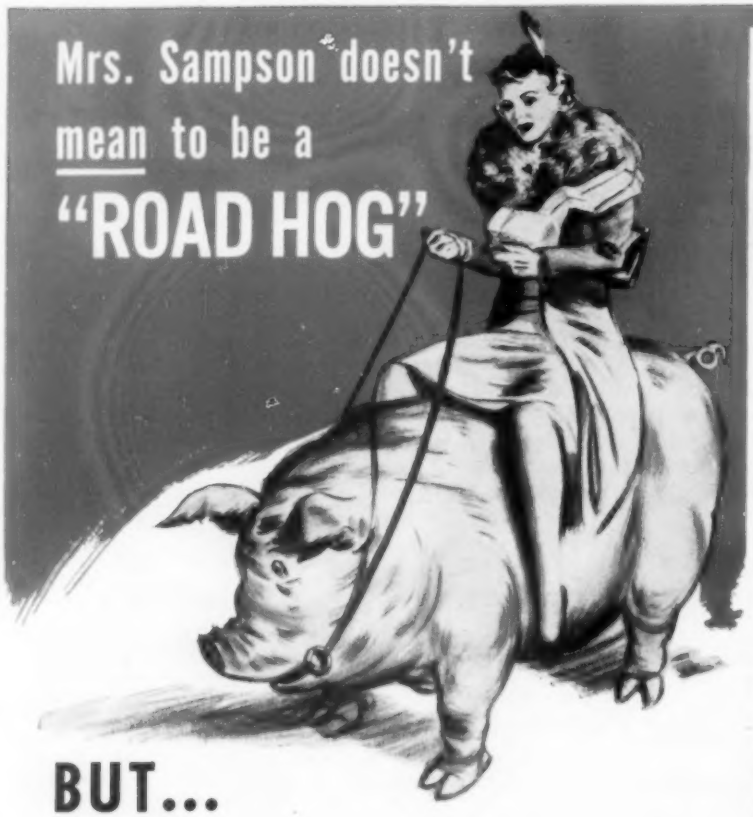
CLARENCE E. RIDLEY
Director, International City Managers' Association

The Municipal Bond Market

Some sales of new issues as reported in January issues of *The Bond Buyer*:

Amount	Borrower and Purpose	Rate (%)	Term (Years)	Basis (%)
$910,000	Rochester, N. Y., General Refunding	.90	6 Avg.	.855
2,000,000	Minneapolis, Minn., Refunding	.90	1-10 Ser.	.885
1,500,000	Lebanon, Pa., Water Works Improvement	1.0	1-30 Ser.	.95
150,000	Akron, O., Incinerator Plant	1.0	1-6 Ser.	.999
500,000	Charlottesville, Va., Water Imp.	1.10	14.50 Avg.	1.052
225,000	Chester, Pa., Sch. Dist.	1.25	1-25 Ser.	1.15
320,000	West Orange, N. J., Refunding	1.40	14.33 Avg.	1.33
280,000	Bay Village, O., Exempted Sch. Dist.	1.50	9 Avg.	1.34
1,340,000	Roanoke, Va., General Obligation Water System	1.25	23.33 Avg.	1.369
1,500,000	Corpus Christi, Tex., State Aid Seawall and Breakwater	2.0	4.16/5.75 O.-A.	1.434
$1,400,000	New York, N. Y., Rapid Transit Railroad Construction and Water Supply	2.0	21 Avg.	1.8737
148,000	Deal, N. J., Beach Protection	1.90	3.75 Avg.	1.88
4,990,000	Miami, Fla., Water Revenue Refunding	1.75	11.83 Avg.	1.8901
267,000	St. Clair Shores, Mich., Refunding	3.0	10.75 Avg.	2.94
1,500,000	Fort Myers, Fla., Refunding	3.0	33.33	3.119

Mrs. Sampson doesn't mean to be a "ROAD HOG"



BUT...

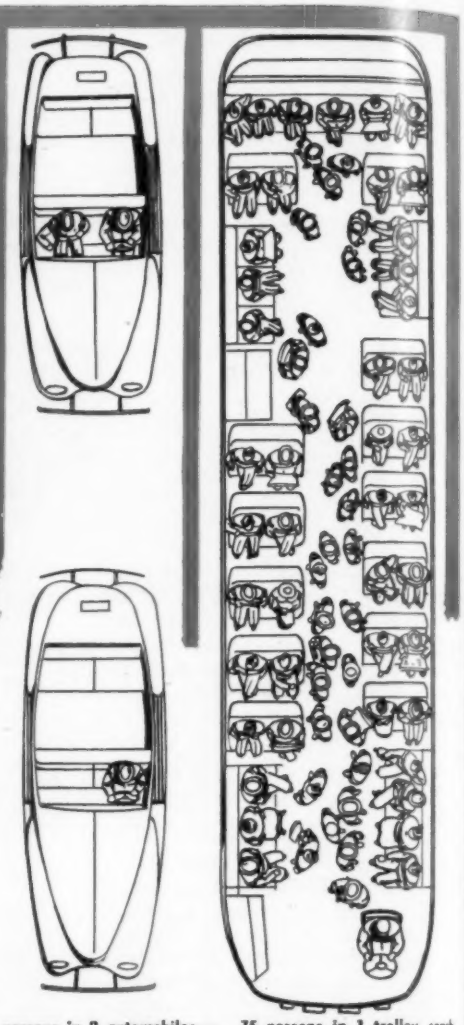
every time she drives her car downtown she takes up 18 times more street space than she would if she rode in a trolley coach

● If hundreds of Mrs. Sampsons, their husbands, and cousins had to depend solely upon automobiles for daily intown travel, they would "get nowhere fast." But if all these people used public-transit vehicles, there would be far less traffic congestion.

Every part of the city would be easily accessible to every other part. People and goods would move freely through uncongested traffic arteries, which would promote sound growth, stable property values, steady tax receipts.

Of course, everyone cannot ride in transit vehicles. But much less practical is any plan based primarily on *private* transportation. Street space would have to be multiplied many times to accommodate the vehicles—and the cost would be tremendous.

Put the bulk of the transportation load on your public-transit system. Then, by moving *people* rather than vehicles, you'll obtain the best transportation for the greatest number at the lowest cost to you, to the passenger, and to the taxpayer. *General Electric Company, Schenectady 5, New York.*



3 persons in 2 automobiles—each occupies 114 sq ft of street space.

75 persons in 1 trolley coach—each occupies 6.6 sq ft of street space.

DES MOINES' wartime riding has risen 50 per cent. Trolley coaches are moving loads that are more than double their seating capacity, increasing schedule speed 3 mph.

Team Up with Transit—You'll Pep Up the Lifestream of Your City!

GENERAL ELECTRIC

107-121-8560

BUY WAR BONDS

Traffic Control and Facilitation

Conducted by Traffic Control & Facilitation Committee, Institute of Traffic Engineers, 60 John St., New York

W. L. Robinson, Chairman; Donald S. Berry, Fred W. Fisch, Maxwell Halsey, Wilfred F. Irvin, Harry C. Koch, Philip S. Mancini, Claude N. Maurer, W. F. Milner, I. S. Shattuck, George M. Webb

Post-War Traffic Program for the District of Columbia

By W. A. VAN DUZER
Director of Vehicles and Traffic
Washington, D. C.

A FIVE-YEAR post-war traffic engineering plan has now been completed and submitted to the Commissioners of the District of Columbia. The plan is based on the assumption that traffic had nearly reached its saturation point at the beginning of the war and that it will return to normal in about five years after the war is over.

The total capital outlay for the changes proposed will amount to $650,000 covering the five-year period. This program includes only control and regulation of traffic under the Department of Vehicles and Traffic and does not include expenditures for the construction of highways and bridges, subways, grade separations, channelization, etc., under the Department of Highways, which represent a separate $20,000,000 program.

One of the most important changes proposed is that all intersections now controlled with four single-face traffic signal lights be equipped with eight traffic lights, two at each corner. This is to allow drivers and pedestrians a clear vision of control lights at all times. The estimated cost will be about $175,000.

Another important change intended to facilitate the movement of traffic in the central congested district is the installation of a central control signal system to vary cycles and coordinate synchronization of lights meeting varying conditions at given points. The capital outlay is estimated at $150,000.

It is planned to interconnect a number of signal zones to provide a smoother flow of traffic within a given zone, and in passing from one zone to another. This item will cost about $20,000.

The replacement of fixed progressive installations at twenty-five intersections with more modern and more progressive equipment so as to synchronize with nearby zones is also proposed. This item would cost about $15,000.

There are now in Washington about 300 traffic signal controllers that have been in use over five years; 150 of these have been in use over ten years. These are to be replaced at a cost of approximately $25,000.

It is proposed to replace or renew all present regulatory warning or directional signs and route markers with durable and attractive signs on metal posts at a cost of about $40,000 a year for the next five years.

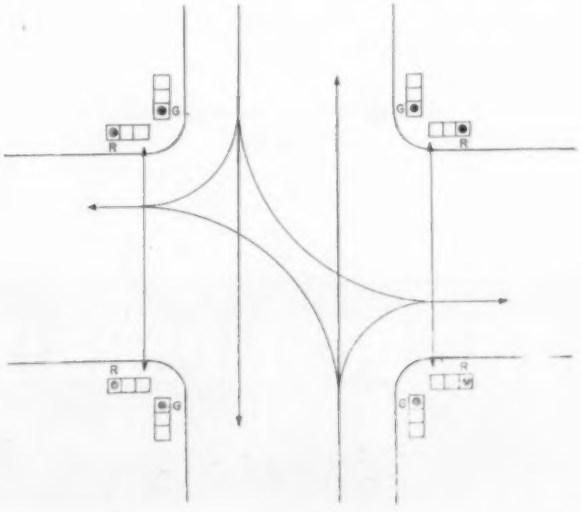
Neon one-way arrow signs (see next page) on part-time one-way streets will be used for traffic guidance during rush periods. These signs have proved to be effective in facilitating the movement of traffic during rush hours. The cost of this item will be $20,000.

Pedestrian barricades used to prevent pedestrians from crossing the streets at dangerous crosswalks or other hazardous locations are to be installed. An expenditure is to be authorized costing $1,000 a year for five years.

Durable or permanent markers in lieu of painted white lines for crosswalks, center lines, and lane lines are also provided at a total cost of $125,000.

The standards proposed for installation of all new traffic signals and abandonment of obsolete signals now in use are approximately the same as those set up in the Manual on Uniform Traffic Control Devices which has the approval of the Institute of Traffic Engineers, the National Conference on Street and Highway Safety, and the American Standards Association. An efficient well-trained engineering staff is recommended at a cost of about $60,000 a year, or about $35,000 a year more than the present appropriation. The Engineering Division would be headed by a Deputy Director and would consist of about 20 persons ranging from traffic enumerators (10 or more) to planning engineers. This Division would be subdivided into three sections dealing with planning, traffic surveys, and accident analysis and prevention.

Post-war safety plans include two inspections of all motor vehicles a year in our own officially operated inspection stations, instead of one inspection a year as at present. On account of



SIGNALIZED INTERSECTIONS
An 8-signal post-war installation planned for Washington, D. C., intersections. It incorporates pedestrian signals on all corners and in four directions.

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war conditions, approximately 72 percent of all cars are now being rejected on first inspection. In 1941 about 57 percent were being rejected on first inspection. Post-war plans call for an additional station at a cost of $65,000 and $10,000 for equipment.

A greatly expanded program of traffic safety education, including driver's training or retraining, is called for. This program would require an annual appropriation of $50,000 a year instead of $20,000 as at present.

Recommended Traffic Planning

RECOGNIZING that urban traffic planning is an urgent responsibility of city administrators and that certain functions are the responsibilities of appropriate public works officials, the Fiftieth Annual Public Works Congress adopted a resolution defining such responsibilities.

1. *Collection and Analysis of Factual Data*—The collection and analysis of all physical and economic data needed to measure existing, and to estimate future, street and highway traffic characteristics and needs.

2. *Traffic Planning*—The preparation and interpretation of plans and recommendations, based on the analysis of comprehensive data necessary for the proper location, function, design and operation of highway transportation facilities.

3. *Traffic Design*—The relating of traffic needs and performance to street, highway and terminal design in the course of development of safe, convenient and efficient traffic facilities.

4. *The Application of Traffic Operational Measures*—The application of uniform traffic operational measure for safe, convenient and economic highway transportation.

Seattle Survey and Post-War Highways

A RECENT Origin and Destination Survey of employees of Boeing Plant No. 2 in Seattle, Wash., has produced valuable data for future highway planning:

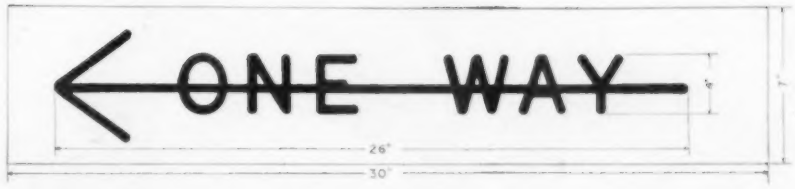
1. To determine the roadways now used by plant personnel needing improvement by widening, resurfacing or the installation of traffic control devices.

2. To facilitate the movement of traffic to and from this particular plant.

3. Combined with data secured in similar surveys at other industrial plants and in the central business district, to determine the location of freeways and other major highways to be constructed in Seattle after the war.

Four data maps were developed to show:

1. Origin of workers.
2. Origin of vehicular traffic.
3. Vehicular volume.
4. Roadways to be improved.



A one-way Neon arrow sign to be used on Washington streets at rush hours. When on operation the arrow burns continuously and the words "one way" flash.

The base map used was the Share-the-Ride Map published by the War Production Transport Commission. In printing the report, the normal procedure would have been to print the four data maps on transparent paper so that the base map would be visible through all four. Due to a shortage of materials, the maps were printed on ordinary paper which was then oiled to give it transparency. Under each of these maps was placed a copy of the base map. This is a procedure that other officials might adopt.

J. W. A. BOLLONG, Traffic Engineer
Department of Public Works, Seattle Wash.

Trolley Coaches for Brooklyn?

IN the improvement of New York City's surface transportation, it would be very desirable for the city to acquire and put into operation some of the modern trackless trolley coaches on many of the important established trolley lines, including the Flatbush Avenue, Church Avenue Crosstown, and the Ocean Avenue lines in Brooklyn. These electric trolley coaches represent the most efficient and convenient surface transportation of the future where too many lines do not converge on a single highway. Their successful and efficient use in such cities as Wilmington, Baltimore, Cleveland, and on the West Coast indicate that they carry more people than the average gasoline coach, can be operated equally as well through our highways, move to the curb for loading on and off passengers, and in case of delay or accident other coaches can pass by and avoid congestion. The power is developed at the power house, which means that the electric coach is able to start without the odor and complications of some of the gasoline and diesel busses.

It is quite probable that our future surface transportation will be confined to these two most efficient and flexible systems of coach transportation. It will be some time before new electric trolley coaches can be obtained but if plans are made now and orders placed, Brooklyn will have its opportunity, at the earliest possible date, to enjoy real improvement in its surface transportation. This would also allow for the disposal of some of the disgraceful junk which is now used to carry citizens and war workers on our so-called trolley systems and enable the few remaining decent trolley units to be used in other trolley lines. The trackless coaches require two trolley wires, and the trolley poles can be converted to attractive combination trolley poles and illuminating units. Where trolley lines are already equipped, the additional cost of the extra wire is small. The clearing up of these important highways would greatly facilitate surface transportation and the more efficient use of these main highways.

—Taken from a speech of HERBERT L. CARPENTER, Vice-President, Commerce & Industry Association of New York, at a meeting of the Flatbush, N. Y., Chamber of Commerce, January 1945.

Citizen Transit Planning

THE importance of transit planning in every city is illustrated by the South Brooklyn (New York) Board of Trade, Inc. President Harold Arens writes "We all know that the surface transportation of Brooklyn is critical. But so far, much of the criticism has been negative and concerned with errors and omissions rather than with constructive and helpful planning to better the service. It is necessary to do some valuable immediate and long-range planning if Brooklyn is to have a first-class post-war surface-transit system. We are considering formation of a borough-wide committee to conduct a continuing study of transit needs. This group could be of great value by consulting with officials charged with operating the transit system in Brooklyn."

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Chicago's Method of Lane Delineation

By OTTO K. JELINEK
Planning Engineer
Chicago Park, Chicago, Ill.

DURING the era of the survey with the fringe on top with its one or two horsepower locomotion, delineation and marking of traffic lanes were unnecessary. Now they are essential.

V. G. Hofer of our Traffic Section has developed a device useful in laying out channelization patterns and other complicated road marking work especially at curves. The device consists of a 5-gallon can with necessary fittings, a master valve, 4 secondary valves, 4 rubber hose run-offs, and side-mount brackets. One end of the run-off is connected to the secondary valve, with the other end fastened to the extremities of the bumper guard by a clamp. The clamp is made from a ¼-inch diameter rod, 24 inches long, shaped into a "U." The clamp is then placed over the bumper guard, with the hose run-off held to the clamp by means of two clips. Water is used as marking liquid.

The device is mounted on the door of a car by a bolt that has a piece of 1½-inch x 3-inch flat rolled steel welded on the head of the bolt.

Simple Operation and Marked Advantages

The driver of the vehicle need only turn the master valve handle which allows a small amount of water to flow to the secondary valves. The secondary valves in turn are so regulated as to allow the water to drip onto the pavement, thus indicating a definite lane pattern. The road markers measure the lane widths from both sides, or on either side of the drippings, depending on the physical road condition, then place marking points about 10 feet apart (parallel to drippings) with marking keel, and to follow up by stomping a smooth chalk line through the points to serve as a guide line for the machine men. Advantages of this device are numerous:

1. It defines lanes, no matter how complicated, to the natural movement of drivers.
2. It saves time in laying out work, particularly at curves.
3. It reduces traffic delays due to the saving of time in laying out the markings.
4. It acts as a safety device in that smaller areas are closed to traffic and further that workers do not have to cross traffic as often as formerly to check measurements.
5. The cost of the device is negligible.

A 5-gallon can was used in the device illustrated. An old hose from a traffic counter was used and a gas hose would serve the purpose as well. The cost of the other fittings totaled $5.

Those interested in building a similar device may obtain a copy of the working drawings by writing to the author at 425 E. 14th Boulevard, Chicago 5, Ill.

MARKING STREETS
LEFT: *A 5-gallon water can and fittings, adjusted to sprinkle water on the road surface. This marks and defines the natural driving lanes of motorists.*

BELOW: *The marker in operation.*

Traffic Bureau Renamed

BUREAU for Street Traffic Research has been renamed Bureau of Highway Traffic by the President and Committee on Transportation of Yale University. Future work includes training and studies of rural as well as urban traffic.

Parking Meters, Police Power Regulation Not Revenue

The following item appeared in the September 1944 MUNICIPAL LAW JOURNAL published by the National Institute of Municipal Law Officers, Washington, D. C.

ON August 18, 1944, the Circuit Court of Oregon, Multnomah County, held that the City of Portland's parking meter ordinance is a valid police power regulation. An abutting property owner had contended that his rights of ingress and egress to his business property were denied by the ordinance but the court declared that parking is a privilege not a right and parking can be regulated by the parking meter ordinance for the benefit of the public at large so no rights of the owner have been infringed. It was also contended that the ordinance is a revenue measure rather than a police power regulation, and the court in holding it is a police power regulation pointed out that parking meter funds collected under the ordinance are placed in a special fund for expenditure on the cost and operation of the meters with the balance to be expended for general traffic control. The evidence was that $1,121,865.16 had been collected from the parking meters, $193,266.78 being spent on the installation and upkeep of the meters with a balance of $928,598.38 being expended for general traffic purposes.

The court reviews the cases on parking meters in other jurisdictions.

Hickey v. Riley, Mayor.

City Attorney L. E. Latourette for Portland. See NIMLO report 37 "Parking Meters as a City Legal Problem."

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High illuminating power is built into every SLATER street lighting lamp. For example, a SLATER 10,000 lumen lamp steadily reflects the brilliancy of 1000 candlepower . . . all this light intensity incorporated into a carefully designed and precisely manufactured filament. Exacting manufacture backed by thorough engineering is a guarantee of quality illumination with SLATER street lighting lamps.

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MANUFACTURERS OF STREET LIGHTING LAMPS AND ELECTRONIC TUBES

BROOKLYN, NEW YORK

A timely message to City Managers

HAND heavy-duty storage batteries, when installed in the following Departmental vehicles, show long life characteristics:

POLICE RADIO CARS	3-6 yrs.
SANITATION TRUCKS	3-6 yrs.
ROAD SCRAPERS & SNOW PLOWS	3-6 yrs.
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HAND storage batteries are unconditionally guaranteed for two years. Departmental test runs are invited.

The HAND LABORATORY
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Electro-Chemical Research and Development
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Check your needs NOW
for **METAL SIGNS**

Keep up-to-date on traffic control—you can now buy CATAPHOTE Metal Reflector and plain Signs for the job! Variety of messages. Long-life, low-cost illumination assured by use of Cataphote Reflector Buttons . . . for round-the-clock effectiveness! No moisture condenses . . . no yellowing with age . . . brilliance guaranteed 3 years! Order today!

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Zoning and Planning Notes

Edited by FRANK B. WILLIAMS
Author of *The Law of City Planning and Zoning*

The Westport, Connecticut, Billboard Case

By ALBERT S. BARD
Counsel, National Roadside Council

THE decision of the Connecticut Supreme Court in the case of *Murphy, Inc.*, v. *Town* of *Westport*, decided November 8, 1944, 131 Conn., p. 292 (40 Atlantic 2d, p. 177), brings both satisfaction and dissatisfaction to planners. The actual decision sustaining the billboard restrictions in a Westport zoning ordinance, in effect since 1930, gives ground for satisfaction. The court's statement (unnecessary to the decision) that it does not follow the Vermont decision of January 5, 1943, limiting the scope of the easement of visibility from the highway appurtenant to abutting land, is a disappointment. Various points in the opinion are here commented upon.

The heavily traveled Boston Post Road runs through Westport for about 5 miles and by town ordinance the land on each side of the highway is zoned for business to a depth of 200 feet, with here and there a deeper zone. There are two or three other small business districts in the town. The town contains a population of about 8,250, and more than 90 percent of its area is residential. Under the ordinance there are but four kinds of districts—three residential, the other business.

Under Connecticut statutes municipalities (including towns) are permitted to zone and thereby to regulate commercial structures, including advertising signs. Acting thereunder Westport prohibited all advertising signs in the residence districts, except that where the premises are used for certain home occupations or offices, small signs not over 2 square-feet in area, indicating such use, are permitted. For sale or to let signs not over 8 square-feet in area are also permitted, provided they refer to the premises on which they stand. This limitation was not involved in the case, but is of interest because of the drastic limitation on the size of such signs as are permitted.

With respect to business districts the ordinance excludes manufacturing except as non-conforming uses, and also a variety of businesses, in effect limiting business generally, in a town predominantly residential, to local retail trade and services. The ordinance also provides: "Billboards or advertising signboards are prohibited in all business districts except as they refer to business conducted on the property on which the billboard stands." This means that accessory business signs (without limitation as to size) are permitted in business districts, but that ordinary billboards are banished unless they were erected before 1930 and now survive (under another clause) as non-conforming structures. As the plaintiff claimed in its argument, the two prohibitions together amount to a prohibition against outdoor advertising anywhere in the town, except as to the old billboards now non-conforming.

In this situation Murphy, Inc., an outdoor advertising company, undertook to move an old non-conforming billboard to a new site in the business district along the Boston Post Road. The zoning enforcement officer stopped the work. The corporation applied for a permit to erect the board, and it was refused. The corporation brought suit to restrain the town authorities from enforcing the ordinance. Judge O'Sullivan of the Fairfield County Superior Court held the ordinance invalid, because unreasonable, and is now reversed by the Connecticut Supreme Court, which holds in effect:

Effect of Supreme Court's Decision

1. Complete banishment of billboards from the business districts of a Connecticut town *may* be perfectly legal. The court says: "If we were to sustain its decision [the decision of Judge O'Sullivan below, who had seen no difference between signs advertising goods sold on the premises and those sold elsewhere], we would in effect be holding that, as a matter of law, the legislative body cannot, with such exceptions as are provided in the ordinance before us, constitutionally prohibit billboards in the business zones of any of our towns, no matter what may be the circumstances of justification which existed in the particular case. We cannot so hold."

2. Signs referring to business conducted on the premises and signs referring to business elsewhere constitute different classes and may be subjected to different regulations. The ordinance is valid in this respect.

3. "Whether or not esthetic considerations in themselves would support the exercise of the police power there can be no question that, if a regulation finds a reasonable justification in serving a generally recognized ground for the exercise of that power, the fact that esthetic considerations play a part in its adoption does not affect its validity." This holding is in line with many precedents.

4. The burden is on Murphy, Inc., to show that in no circumstances can the ordinance be constitutional, and it has not sustained this burden. (But why the court granted a new trial rather than dismissing the complaint is not explained by it. If billborads *may* be banished from a business district in *any* circumstances, the record seems to show that this is such a case.)

Comments on the Chief Justice's Opinion

Such being the *decision*, some brief comment upon points in the opinion of Maltbie, C. J., may not be amiss.

5. Chief Judge Maltbie recognizes the dangers inherent in billboards. Judicial recognition of these dangers goes back at least to 1911. (*St. Louis Gunning Co.* v. *St. Louis*, 235 Mo. 99). In 1912 Raymond B. Fosdick's report as Commissioner of Accounts to Mayor Gaynor of New York City made similar findings of fact. Since then the traffic danger arising from distraction of attention has become recognized. This danger was found as a fact by the Master who reported to the court in the Massachusetts Billboard Cases (*General Outdoor Advertising Company, Inc.*, v. *Department of Public Works*, 289

Municipal officials, city attorneys and city planners interested in the important Connecticut billboard case discussed by Mr. Bard in the accompanying article, may also wish to consult his analysis of previous decisions by the Vermont and Pennsylvania courts. For the Vermont billboard case, see "New Approach to Control of Outdoor Advertising," in *The American City* for February 1943, pages 93, 95, and an item on page 99 of the April 1943 issue. The Pennsylvania decision of 1942 is discussed in "The Eye Gets Legal Protection," *The American City* for November 1942, page 73.

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Now, General Electric's sight-saving, life-saving luminaire is again available in its prewar construction with Alzak* aluminum reflector and cast-aluminum hood. Accident statistics in leading cities prove its great contribution to traffic safety. Cost records prove its over-all economy.

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**Manufactured under Aluminum Company of America patents.*

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GOOD STREET LIGHTING—THE SIGN OF A GOOD PLACE TO LIVE

GENERAL ELECTRIC

BUY ALL THE BONDS YOU CAN—AND KEEP ALL YOU BUY

Mass., 149) and was recognized by the court (1935).

In this connection it is interesting to recall that Robbins B. Stoeckel, one of the most intelligent and efficient Motor Vehicle Commissioners Connecticut has had, came to the conclusion that the multiplicity of *merely legitimate traffic signs* led to a lack of attention on the part of drivers, and he reduced their number, thereby making more important and noticeable those that were left.

An obvious ground for the complete banishment of advertising signs from a business district is the protection of the legitimate shop and business signs of the district which thereby become more conspicuous. The latter are of value to the district, both to shoppers and shop-owners, and the Vermont billboard case (8 below) holds that shop signs have a *constitutional* right to be seen from the highway, being in that respect unlike outdoor advertising.

6. The opinion recognizes that the Connecticut statutes include among the particulars of welfare-regulation the "conservation of the natural or landscaped and improved scenery" and the "public comfort of transportation conditions" (both of which are largely esthetic), and that authority may be cited both for and against an exercise of the police power based upon esthetic considerations alone. But the court did not commit itself on this point.

7. In that connection the opinion suggested that restrictions upon outdoor advertising *might* be valid when made a part of a zoning plan, although the same restrictions would not be sustained if separately or independently imposed. In other words, the court suggests that the benefits arising out of a zoning scheme may permit a little extra repression upon the use of private property. This is the first judicial suggestion known to the writer making such a distinction between direct regulation under the police power and zoning—equally an exercise of the police power. Obviously this suggestion is relevant to the question of reasonableness. Is the entire scheme, benefits and restrictions all taken together, reasonable or unreasonable? Also to the question of arbitrary or unequal treatment.

8. The Vermont billboard case decided by the Supreme Court of Vermont in January 1943 (*Kelbro, Inc.*, v. *Myrick*, 113 Vt. 64; s.c. 30 Atlantic Rep. 2d 527) which considered the scope of the easement of visibility from the highway attaching to abutting lands, and came to the conclusion that the constitutional right of such property to have business signs visible from the highway covered only signs relating to business conducted on the premises, and did not cover signs relating to business on other land, was discussed in the arguments before the Connecticut court, but the latter refused to follow the Vermont decision.

This expression of opinion was wholly gratuitous. If the Vermont doctrine applied, Murphy had no case. If it did not apply, the result would be the same, for the court held the Westport ordinance reasonable and operative upon Murphy anyway (pending any different decision upon a new trial). Moreover the court had already held (point 2 above) that business signs relating to business on the premises are in one class and billboards in another, overruling in this respect the court below. Why then might not Murphy's signs be regulated without regard to any regulation of ordinary business signs?

9. The opinion states that the Connecticut statute recognizes a property interest in the advertisement of business off the premises because it requires a license to engage in such advertising. But this is to beg the question. The requirement of a license is merely a condition attached to the conduct of the advertising business *when and if permitted*. It is not a recognition of any constitutional right to carry on the business.

10. On the whole the Connecticut opinion compares unfavorably with the great opinion of Chief Judge Rugg in the Massachusetts Billboard Cases. The Connecticut opinion cites a large number of cases as authorities in support of certain points in its discussion. But the opinion lacks the forthright reasoning of its forerunners in Massachusetts and Vermont. It masses citations, but its discussion suffers from vagueness, and leaves a reader familiar with the subject with a sort of Good-Lord-Good-Devil impression. Both sides asked for a reargument of the case, but reargument was denied.

Suggested Mayor's Proclamation

To help the American Red Cross achieve its $200,000,000 goal during March

As one effective means of local cooperation in the nation-wide Red Cross campaign which opens March 1, the National Headquarters urges that every Mayor issue on February 28 some such proclamation as the following:

Whereas, American fighting men the world over are giving to the last ounce of their strength in the effort to free the world of dictatorships, and

Whereas, the American home front is striving through its war industries, its manpower and its moral support to stand firmly behind the armed forces, and

Whereas, the American Red Cross is serving our fighting men at home and overseas, as well, by means of undertanding, friendly men and women trained especially for their duties, and

Whereas, the American Red Cross assists servicemen's families in the United States as well as serving those in uniform, and

Whereas, the American people through the Red Cross have sent 10,000,000 pints of blood to our wounded, thus forming a veritable life-line between us and them, and

Whereas, the American Red Cross is ready to give assistance in the event of any natural or man-made disaster on the home front,

THEREFORE I, _____Mayor of the City of _____, in accordance with the proclamation of the President of the United States, naming March as American Red Cross Month, do here and now urge all citizens of this community to contribute without reservation to the 1945 Red Cross War Fund through the local chapter; I further urge that they remember that the war is not yet won, and that when the peace comes the Red Cross must still, through its War Fund, maintain itself to work for the better interests of the American people in the post-war world.

An excellent collection of news stories, cartoons, and suggested editorials for local use is available in an 8-page *1945 War Fund Feature Sheet*, obtainable from the Publicity Department of the National Headquarters of the American Red Cross, Washington 13, D. C. Most local chapters can supply helpful information of hometown interest, and will welcome the cooperation of the Mayor and other municipal officials in their efforts to achieve and exceed local quotas.

World War I memorial.

Give them a memorial that lives

They fight for an ideal—and the ideal revolves around their own home towns, and the future of their families. This ideal can best be perpetuated by a memorial that benefits these families, and typifies a practical peace.

A memorial that will aid the future of their families day after day, is a Public Safety Lighting System. It will provide greater individual freedom, safety after dark, safety from traffic accidents, burglaries, robberies and property damage.

This memorial will also be a reminder of the administration that abolishes darkness . . . the darkness which encourages delinquency, breeds crime, complicates police work and undermines public confidence.

Many cities are today studying this problem with the aid of Westinghouse street lighting engineers who have years of experience in this work. These engineers are equipped with information and data from many cities and towns, much of which applies to your own problem.

The story of good Public Safety Lighting is graphically told in a new Westinghouse book that contains facts helpful to civic leaders. Ask your electric power company for your free copy of "Target for Tonight" or write Westinghouse Electric & Manufacturing Company, P. O. Box 868, Pittsburgh 30, Pa. There's danger in darkness . . . but safety in light. J-04031

For World War II—a Public Safety Lighting System will memorialize better living . . . safety for the individual . . . the end of brutalities that flourish in the darkness. It will symbolize an enlightened world, an end to blackouts forever.

Westinghouse

PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE

Public Safety Lighting

Outdoor Lighting

STREETS AND HIGHWAYS

Cut All Outdoor Lighting to Minimum for Safety

ANTICIPATED bituminous coal requirements of 620,000,000 tons against an expected production of less than 600,000,000 tons impelled Director of War Mobilization James F. Byrnes to request the War Production Board to eliminate the use of practically all electricity for outdoor advertising, ornamental and display lighting. The purpose is to conserve 2,000,000 tons out of the necessary saving of 60,000,000 tons for the winter. Incidentally, it is estimated that this curtailment will reduce utility revenues by $60,000,000.

In promulgating the necessary WPB orders, WPB wisely avoided assuming responsibility for public safety, including traffic safety, as indicated in italics below. The uses ordered eliminated are:

1. Outdoor advertising and outdoor promotional lighting
2. Outdoor display lighting, except where necessary for the conduct of the business of outdoor establishments
3. Outdoor decorative and outdoor ornamental lighting
4. Show window lighting, except where necessary for interior illumination
5. Marquee lighting in excess of 60 watts for each marquee
6. *Walkway street lighting in excess of the amount determined by local public authority to be necessary for public safety*
7. Outdoor sign lighting except for:
   (a) *Directional or identification signs required for fire and police protection, traffic control, transportation terminals or hospitals; or directional or identification signs for any similar essential public services the lighting of which is specifically certified to be necessary by local public authority. Certification shall be made in writing to the appropriate electric supplier and need not be in any particular form*
   (b) Directional or identification signs using not more than 60 watts per establishment, for doctors and for hotels, and other public lodging establishments

Chairman J. A. Krug announced that Edward Falck, Director of the Office of War Utilities, will administer the order, which is effective throughout the nation. Provision is made, however, for the Office of War Utilities to exempt from the order's terms any section of the country where it is determined that compliance will not reduce the consumption of coal or other scarce fuels. (Example—power supplied by hydro-electric stations.)

As one of the penalties for non-compliance, the new order provides that WPB may direct the discontinuance of electric service to any consumer who willfully violates the order.

The WPB also appealed for maximum conservation in all uses of electricity which are not prohibited by the order and stated that "the electric industry of the nation, both public and private, has pledged its wholehearted cooperation in support of the fuel conservation program."

Approving the actions taken by Director Byrnes and the War Production Board, the President said: "In view of the request that occupants of homes regulate the temperature at 68 degrees, it was essential that the WPB prohibit outdoor advertising, ornamental and display lighting which should save approximately two million tons of coal annually."

An Englishman Considers Main Road Lighting

POST-WAR proposals are important as well as interesting wherever they are made, for they encourage the making of other proposals and plans which are essential to real activity after the war. There is some consideration in Great Britain of lighting the Class 1 or "trunk roads." F. H. Pulvermacher discussed the project in the *Electrical Review*, of London. Of the 180,500 miles of roads in Great Britain, 27,550 are rated as Class 1 and 17,630 as Class 2, the remaining mileage being mostly for local travel.

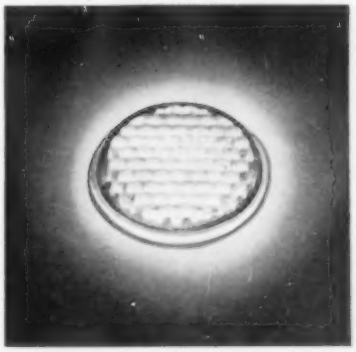
County Councils are responsible for all classified roads outside the area of metropolitan and county boroughs, and urban authorities for all those within their areas. In 1937 the Ministry of Transport assumed control of 4,500 miles of the Class 1 roads, and it is 3,000 miles of these that Mr. Pulvermacher considers for illumination.

At spacings prescribed by the Ministry of Transport's Departmental Committee on Street Lighting, 105,000 standards will be required for the lighting of these main roads from town to town. Either the mercury vapor or the sodium vapor lamp is recommended at a mounting height of 25 feet with an overhang from curb of not over 6 feet, the units staggered. A 3-phase 4-wire system carried on the standards is suggested as the most economical energy supply, the entire system of wires, standards, brackets,

At pre-war prices, the cost of the 105,000 units is estimated at about $12,500,000 plus $2,500 per mile (one side) or $15,000,000 for the line, a total capital cost of $27,500,000. With 400-watt lamps lighted from dawn to dusk, the annual consumption is given as 175,000,000 kwh and the cost, at 2 cents per kwh, as $3,500,000.

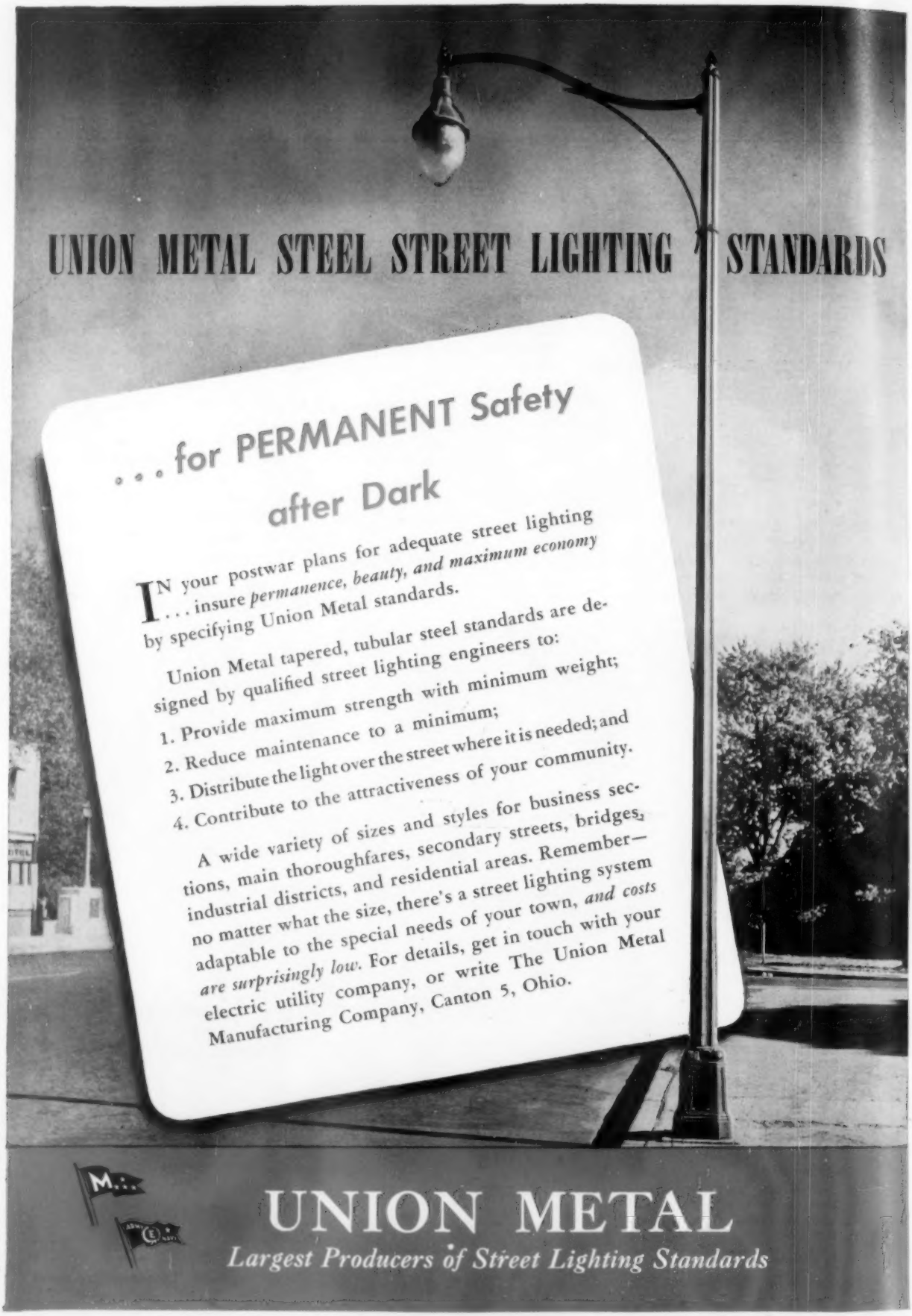
Lamp renewals would come to $2,000,000, labor $1,500,000. Adding interest and other fixed charges of $2,000,000 brings the total annual operating and maintenance cost around $9,000,000 or $3,000 per mile.

The advantages are employment after the war, safer, faster driving, fewer accidents, a constant indication of main roads, less fatigue, more night driving.



PHOTOGRAPH COURTESY, SIGNAL SERVICE CORP., IRVINGTON, N. J.

A Lucite reflector button used to illuminate traffic signs.


UNION METAL STEEL STREET LIGHTING STANDARDS
. . . for PERMANENT Safety after Dark
IN your postwar plans for adequate street lighting . . . insure *permanence, beauty, and maximum economy* by specifying Union Metal standards.
Union Metal tapered, tubular steel standards are designed by qualified street lighting engineers to:
1. Provide maximum strength with minimum weight;
2. Reduce maintenance to a minimum;
3. Distribute the light over the street where it is needed; and
4. Contribute to the attractiveness of your community.
A wide variety of sizes and styles for business sections, main thoroughfares, secondary streets, bridges, industrial districts, and residential areas. Remember—no matter what the size, there's a street lighting system adaptable to the special needs of your town, *and costs are surprisingly low.* For details, get in touch with your electric utility company, or write The Union Metal Manufacturing Company, Canton 5, Ohio.
UNION METAL
Largest Producers of Street Lighting Standards

65 Years Old With a Brilliant Future

SIXTY-FIVE years ago last December 31 the late Thomas A. Edison demonstrated at Menlo Park, N. J., the first system of street lighting in which the incandescent electric lamp was used for outdoor illumination. That event, says the Edison News Bureau, New York City, was the forerunner of the gigantic municipal lighting systems in effect today throughout the world.

Trains heavily loaded with passengers were run to Menlo Park, notwithstanding stormy weather which prevailed that night in 1879. Edison's laboratory that evening, according to an account in a New York newspaper the next morning, "was brilliantly illuminated with 25 electric lamps, the offices and counting rooms with eight, and 20 others were distributed in the street leading to the depot and in some of the adjoining houses. The entire system was explained in detail by Edison and his assistants and the light was subjected to a variety of tests."

Edison kept this system burning a few hours each evening for a number of days, during which period he proved it to be practical, economical and safe and convinced skeptics that it was more desirable than the other city street lighting systems which were being used at the time, including gas lamps, the sputtering electric arc lamp and, in the remote villages, kerosene lamps.

During these 65 years the industries devoted to the utilization of the electric lamp for street lighting have become so extensive that no accurate figures covering them are available today, including labor or materials used or real estate properties and attendant assets.

Is Daytime Visibility Needed at Night?

EYES of millions of American automobile drivers would be menaces on the proposed national system of speedways now pending before Congress, asserts the Better Vision Institute. The proposed roads, to connect all cities of 10,000 or more population, would be designed for cruising speeds of "not less than 75 miles an hour."

Although the visual qualifications of drivers in respect to high speeds are almost wholly neglected by automotive safety organizations, enough facts have come to light to show that eyes of drivers have an important bearing on safety, and that many drivers now are operating their cars at speeds beyond their visual qualifications.

"A series of studies on the relation of seeing distances to car speeds was made at Iowa State College, which led A. R. Lauer, Associate Professor of Psychology, to conclude that unrestricted driver licenses should be given only to those having at least 20/40 vision in both eyes, or 20/30 vision in one eye. When vision reaches 20/80 or 20/100 it may be best to limit the applicant to daylight driving or to speeds below 30 miles an hour. For eyes with visual acuity of less than 20/100, he recommends top speeds of under 25 miles an hour; such recommended speeds seem low, but they are calculated in accordance with the known facts of seeing and stopping distances. They actually represent safe speeds for these classes of drivers.

Said 20 Years Ago:

UNTIL the advent of the automobile, street lighting, which Dr. Charles P. Steinmetz characterized as "distributed darkness," was sufficient for its purpose and served to illuminate street crossings and define roadways. Modern traffic conditions, however, call for higher intensity of illumination and for systems which will not only light the street by night, but also be attractive by day.

Owing to the higher cost of the so-called ornamental street-lighting systems and the fact that street-lighting rates are more or less a fixed quantity, central stations ceased to take an active part in the promotion of modern street-lighting systems, and the burden fell on the shoulders of progressive citizens.

Since central stations in many cases cannot or are unwilling to undertake the financing of modern ornamental street-lighting systems, it would appear that this problem may be handled by the municipality's designing a comprehensive street-lighting system covering the entire city and which may be extended to new systems as they are developed without materially disturbing the existing system. Suitable types of ornamental posts and equipment should be selected for various classes of streets and made standard throughout the city. In this way a flexible, well-balanced system may be designed which can be installed gradually as the necessary funds are provided.

It is now generally recognized that modern traffic conditions require a high intensity of illumination in street lighting; and since a high intensity means more and larger units, municipal officials, when designing a street-lighting system, should take advantage of the latest developments in light control and adopt the most efficient method. This involves the study of the various types of glassware, lamp sizes, and standards which are available today.

The city with the best-lighted business and residential streets is bound to attract the largest number of new property owners and new customers for its business houses. This has been demonstrated time and again in small communities, in middle-sized cities, and in the individual districts of our largest cities. It is true everywhere that business follows light.

L. A. S. Wood
Late Chief Lighting Engineer
Westinghouse Electric & Mfg. Co.
Cleveland, Ohio
in THE AMERICAN CITY *for February* 1925

Sell Street Lighting

I ALSO want to dwell for a moment on another of our sales opportunities—one which has had, in my opinion, a very poor selling job done upon it, namely, street and highway lighting. Probably tons of statistics can be produced to prove that traffic accidents bear a direct relationship to the type of lighting that prevails—poor lighting, a high accident rate—good lighting, a low accident rate. With this premise so well established, it would seem a simple undertaking to sell good lighting for streets and highways throughout this land of ours. However, it seems to be one of the hardest of our markets to "crack" and I am of the opinion that much of the fault lies within our own industry. On almost every other type of lighting job our illuminating engineers are pretty much in accord as to how the problem should be solved, but when we get to highways and streets you will usually get a different answer from each lighting engineer. While I do not profess to be a lighting technician, yet, it does seem to me that the problem is one that can be reduced to simple terms and that proper specifications can be developed to fit street and highway conditions as we find them.

R. C. McFadden, Sales Manager, Southern California Electric Co., in an address before the 1944 Annual Commercial Meeting, EEI, Chicago.

American Street Scene . . . Post War

Plan STREET LIGHTING Now . . .

For Safe, Peace-Time Traffic . . .

To be efficient, Street Lighting must be planned . . . The details of traffic flow, unusual or hazardous sections, expected changes in future traveling methods—all must receive careful study . . . And after proper analysis the complete plan for your locality and individual conditions should be made by competent authorities.

Holophane Engineers offer you their aid—and the knowledge acquired from years of concentrated experience . . . They will tell you about the new light patterns, new methods and will make recommendations that will assure the most satisfactory street illumination for your community. Their services are available without charge . . . Write for engineering data.

HOLOPHANE COMPANY, INC. . . . *Lighting Authorities Since 1898*

342 MADISON AVENUE, NEW YORK 17 • Holophane Co., Ltd., 385 Yonge St., Toronto, Can.

Wartime Water Rates—XVI

Rates this month show Harrisonburg, Va., with a more simplified rate; Fond du Lac, Wis., and Lynchburg, Va., with a 15 percent reduction; and Duquesne, Pa., with a 33 1/3 percent reduction over those published previously in The American City.

Fond du Lac, Wis.

Rates:

OUTPUT CHARGES

First 2,000 cu. ft. per quarter, 20c per 100 cu. ft.
Next 3,000 cu. ft. per quarter, 18c per 100 cu. ft.
Next 20,000 cu. ft. per quarter, 16c per 100 cu. ft.
Next 75,000 cu. ft. per. quarter, 10c per 100 cu. ft.
All over 100,000 cu. ft. per quarter, 5c per 100 cu. ft.

SERVICE CHARGES

⅝" meter	$ .75	per quarter
¾" "	.90	" "
1" "	1.00	" "
1¼" "	1.25	" "
1½" "	1.50	" "
2" "	2.00	" "
3" "	3.00	" "
4" "	5.00	" "
6" "	10.00	" "
8" "	15.00	" "

The service pipe from the main in the street to the curb line is laid by the Water Department upon application from the consumer and payment of $1.00 for the permit. The Water Department receipt for this payment is evidence to the plumber that permission has been granted by the Department for the service pipe connection. Service pipes must be laid by a licensed plumber, and a separate pipe must be laid for each building. Service pipes from the main to the building must be laid not less than 6 feet below the surface after the street is brought to grade. The service pipe from the curb to the building must be maintained by the owner of the premises, and the owner must keep the curb boxes free and accessible at all times.

There were 221 fire hydrants in service on January 1, 1925, when a rate of $25,000 per year for public hydrant rental was established. Each additional hydrant installed since that time is billed at $50 per year.

Fire protection service connections for automatic sprinkler systems are billed at the following rates:

2"	$3.75	per quarter
3"	5.00	" "
4"	6.25	" "
6"	8.75	" "
8"	10.00	" "

General Data:

Population served—27,000
Number of services—7,080
Number of meters—7,589
Number of hydrants—543
Miles of water main—75
Supply—wells
Treatment—chlorination
Tap water—430 ppm $CaCO_3$, pH 8.2
Average consumption—1½ mgd
Plant capacity—12 mgd

Consumer Costs Per Month:

3,000 gals.	(400 cu. ft.)	$ .80
5,000 "	(667 " ")	1.33
10,000 "	(1,333 " ")	2.53

Rates have been reduced about 15 percent since their last appearance in THE AMERICAN CITY for June 1935. Because of increased material costs and wage and salary increases our income for 1943 was lower than for 1942.

EDW. J. BRAUN
Superintendent

Harrisonburg, Va.

Metered Rates:

(Within city limits)

First 4,000 gals. or fractional part thereof, per quarter, $1.40
Next 6,000 gals. per quarter, 30c per 1,000 gals.
Next 90,000 gals. per quarter, 15c per 1,000 gals.
All over 100,000 gals. per quarter, 11c per 1,000 gals.
Flat rates range from $1.40 to $45.00 per quarter

(Outside city limits)

First 7,500 gals. or any fractional part thereof, per quarter, $3.00
Next 492,500 gals. per quarter, 40c per 1,000 gals.
All over 500,000 gals. per quarter, 30c per 1,000 gals.
Flat rates, $3.00 per quarter

General Data:

Population served—13,500
Number of active services—2,548
Number of meters—2,154
Number of hydrants—196
Miles of water main—50.37
Supply—gravity from mountain 13 miles from city
Treatment—ammonia, chlorine
Raw water—(?) ppm $CaCO_3$, pH (?)
Tap water—(?) ppm $CaCO_3$, pH (?)
Plant capacity—1¼ mgd
Average consumption—800,000 mgd

Consumer Costs Per Month:

3,000 gals.	(400 cu. ft.)	$ .95
5,000 "	(667 " ")	1.57
10,000 "	(1,333 " ")	3.07

These rates went into effect on March 1 of last year and represent chiefly a simplification of rates previously used. The previous listing appeared in THE AMERICAN CITY for November 1940.

WM. G. MYERS
Superintndent

Duquesne, Pa.

Water Rates:

Uniform rate of 40c per 1,000 gals. with a 5c penalty if the bill is not paid before the 15th of the current month.

The city donates 1,000 gallons per month free to all churches and makes no charge for municipal use of water. There is no charge for fire hydrants or public fire protection.

The charge to a new consumer for tapping the main varies from $20 to $35.

General Data:

Population served—23,000
Number of services (100 percent metered)—3,500
Number of hydrants—175
Miles of main—30
Supply—Artesian wells
Treatment—Lime for pH control
Average consumption—1 mgd
Plant capacity—3 mgd

Consumer Costs Per Month:

3,000 gals.	(400 cu. ft.)	$1.20
5,000 "	(667 " ")	2.00
10,000 "	(1,333 " ")	4.00

This represents an increase of 33⅓ percent over those rates appearing in THE AMERICAN CITY for May 1940. At this time, unless the price of materials by reasons of the war increases to unexpected heights, we should get along very well.

E. FORREST WILLIAMS
Superintendent

Lynchburg, Va.

Rates:

560 cu. ft or less $1.20 excess at $2.16 per 1,000
3,000 cu. ft. $6.47 excess at $1.80 per 1,000
10,000 " " 19.07 " " 1.44 " "
20,000 " " 33.47 " " 1.08 " "
40,000 " " 55.07 " " .75 " "
70,000 " " 77.57 " " .60 for all over

The minimum charge monthly is based on the size of the meter and is as follows:

⅝" meter	$1.20
¾" "	1.50
1" "	2.00
1¼" "	3.00
1½" "	4.00
2" "	6.00
3" "	11.00
4" "	22.00
6" "	45.00

The public fire hydrants are billed by the Water Department to the city at $20.00 per hydrant per year.

There is no charge now on private fire hydrants nor private sprinkler systems.

General Data:

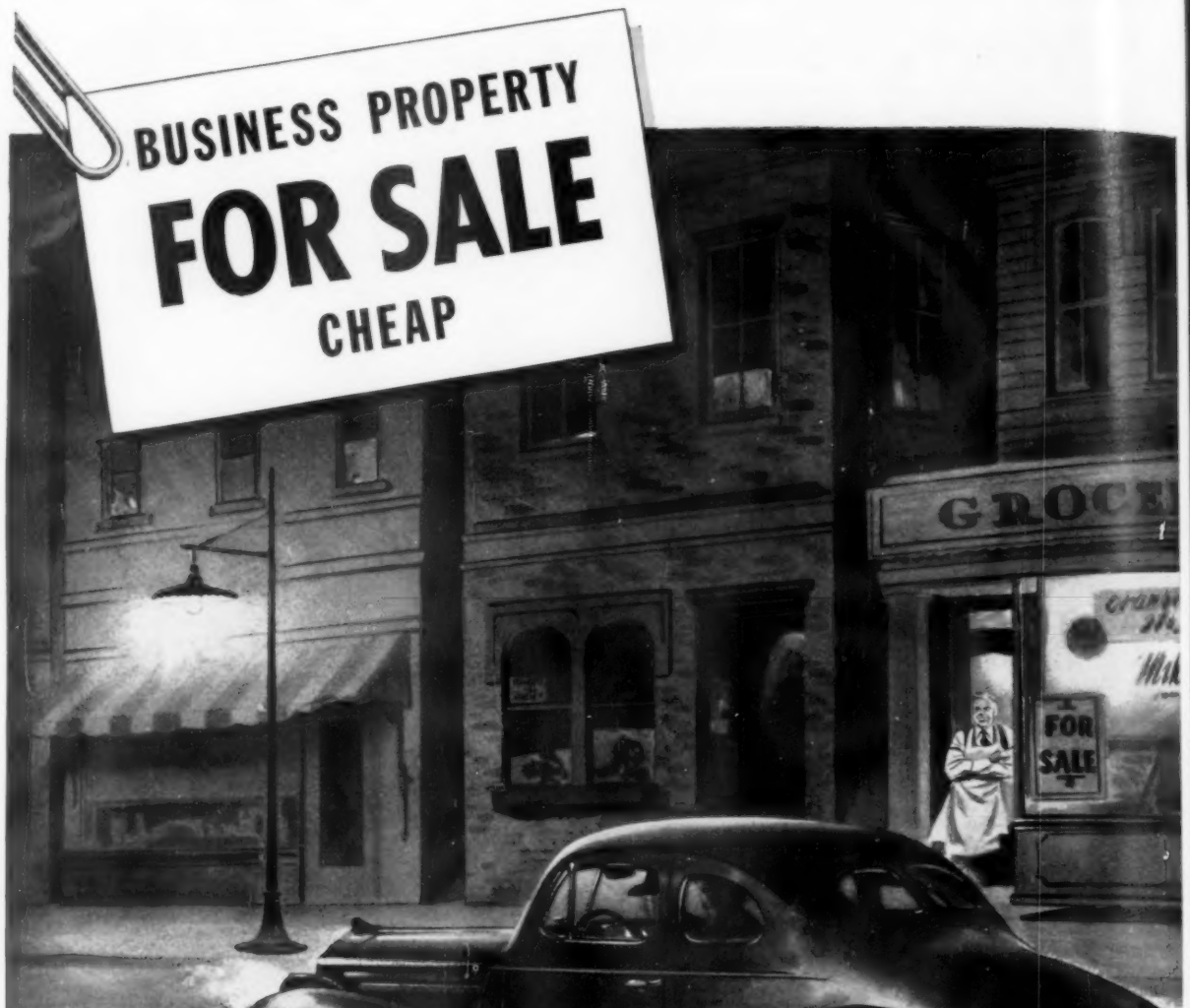
Population served—50,000
Number of services (100 percent metered)—10,850
Number of hydrants—782
Miles of water main—141
Supply—impounding reservoir
Treatment—coagulation with alum, post-chlorination
Raw water—10 ppm $CaCO_3$, pH 7.0
Tap water—12 ppm $CaCO_3$, pH 6.5
Average consumption—4½ mgd
Plant capacity—6 mgd

Consumer Costs Per Month:

4,200 gals.	(560 cu. ft.)	$1.20
5,000 "	(667 " ")	1.42
10,000 "	(1,333 " ")	2.90

These rates represents about a 15 percent increase over those shown in THE AMERICAN CITY for August 1934.

R. D. WRIGHT
Acting Superintendent



LOOKING for a place to invest some extra cash? We know of a great many small stores whose owners would like to sell. Of course they're in the backwaters of American business . . . on dark and gloomy streets where shoppers seldom pass. But you could pick them up CHEAP!

As a matter of fact, you might say the same thing for many entire communities! Lack of good street lighting has kept them out of the limelight, away from a fair chance to grow and prosper. The tragedy of it all, for the individual, or the community, is that the difference in cost between poor street lighting and adequate street lighting is usually very small. And facts show that adequate street lighting pays for itself many times over in increased business, greater civic pride, fewer traffic accidents and street crimes.

Is the street lighting in your town adequate to postwar needs? Why not look around tonight and make sure? If you find that improvements should be made, get in touch with The Street and Traffic Safety Lighting Bureau, 155 East 44th Street, New York 17, N. Y., for ideas and assistance on how to get started. Or talk your ideas over with your electric utility company. Its street lighting specialists will be glad to help you in a score of ways.

GOOD STREET LIGHTING HELPS BUILD A PROSPEROUS COMMUNITY

Municipal Law Notes and Decisions

Prepared by NATIONAL INSTITUTE OF MUNICIPAL LAW OFFICERS, Washington, D. C
Charles S. Rhyne, *Executive Director*

Airports . . . Taking of by State Agency Without Compensation . . . Due Process Invoked by City

In suit to restrain the Park Board from transferring the possession of the airport to the Minneapolis-St. Paul Metropolitan Airports Commission, held that regardless of whether airport held by city for a proprietary or governmental purpose, neither city nor Park Board can invoke the due process clause as against the state itself or against the commission which was created to take over the airport without compensation. *Monaghan v. Armatage*, 15 N. W. (2d) 251 (Minn. July 7, 1944, Reh. Den. July 28, 1944).

Building Permit . . . Mandatory Injunction for Issuance of Res Judicata

In action to enjoin defendant from constructing a building on certain premises wherein defendants sought mandatory injunction against city to require issuance for a permit, judgment affirming trial court's judgment in so far as it denied plaintiff's application for temporary injunction and reversing it in so far as it denied mandatory injunction prayed for by defendants constituted a "Final Judgment" so as to sustain a plea of *res judicata* upon subsequent trial. *City of Gilmer v. Moyer*, 181 S. W. (2d) 1020 (Tex. App. June 8, 1944, Reh. Den. June 15, 1944).

Civil Service . . . Employment Practices Violating Constitution

In action against Board of Education to enjoin employment practices violative of the constitutional provisions pertaining to civil service, held that practice of employing a building custodian who in turn personally hired and discharged at will all matrons, firemen and janitorial help was violative of the constitutional provisions as to Civil Service. *Bech v. Board of Education of City of New York*, 50 N. Y. S. (2d) 19 (N. Y. Sup. Ct. Kings Co. July 5, 1944).

City Council . . . Salary Increases for Police and Firemen

Where city council was without power to increase the total of the annual budget, ordinances which provided for increase in salaries of members of police and fire departments but which were enacted after the annual budget containing no recommendation covering such increase had been received by the City Council and read to it, were void. *Allen v. City of Cambridge*, 53 N. E. (2d) 925 (Mass. June 2, 1944).

Dimout . . . Liability of City for Injury to Passenger Walking Off Subway Platform

City is not liable for injuries to prospective passenger who walked off elevated platform in the dimout where there was evidence that dimout lights installed to light the platform met approval of Army officials and that 100,000 passengers had used station during dimout hours. *Gaglio v. City of New York*, 143 Fed. (2d) 904 (N. Y. Ct. of App. July 13, 1944).

Dumps . . . Liability of City for Fire Originating in

City is not liable for negligence in maintaining a dump since it was not established that dump was maintained in an improper manner and since city would not have been liable even if fire originated from the dump unless city had been maintaining a nuisance. *Gordon v. Murray City*, 151 Pac. (2d) 193 (Utah Sept. 8, 1944).

Excavations . . . Permit to Make . . . Exercise of Police Power

Ordinance of city of Oakland requiring property owner to secure permit from city managers to make excavation in property, except an excavation for foundation for erection of a building for which a building permit has been issued, is valid as an exercise of the city's police power. *Ex parte Angelus*, 150 Pac. (2d) 908 (Col. App. Aug. 8, 1944).

Eyeglasses . . . Prohibiting Advertising of Prices of

An ordinance prohibiting the advertising by paper, radio, or otherwise the price of lenses, complete eyeglasses or frames, with or without professional services or credit terms, installment payments or price plans, held to be a reasonable and valid exercise of the police power. *City of Springfield v. Hurst*, 56 N. E. (2d) 185 (Ohio Aug. 2, 1944).

Firemen . . . Hours of Work . . . Rest Periods

Under a statutory amendment providing that each fireman "in addition to receiving a minimum of 24 hours off duty in each period of 48 hours shall receive an additional period of 24 consecutive hours off duty in each period of 14 days" held to allow only a double period off duty every two weeks and not three consecutive rest periods. *State ex rel Caleb v. King (City of East Cleveland)* 56 N. E. (2d) 267 (Ohio Aug. 2, 1944).

Firemen . . . Prohibition Against Engaging in Another Business

Rule of City Fire Department prohibiting firemen from engaging in another business while off duty is valid and, therefore, fireman's dismissed for being employed as a senior time study engineer in an aircraft company should be upheld. *Calfapietra v. Walsh*, 49 N. Y. S. (2d) 829 (N. Y. Sup. Ct. N. Y. Co. July 26, 1944).

Gambling Devices . . . Baseball Game . . . Injunction Against Confiscation

A baseball game slot machine which did not give a free play, prize or return any money, held not to be a gambling device and a permanent injunction against confiscation would issue against the Director of Public Safety of the city of Newark. *Stirling Distribution Inc., v. Keenan*, 39 Atl. (2d) 79 (N. J. Sept. 14, 1944).

Junk Yards . . . Attractive Nuisance

City held not liable for injuries sustained by 11 year old girl while playing on old automobile bodies deposited in an unstable manner on city land near junk yards, such bodies not constituting an attractive nuisance. *Esquibel v. City and County of Denver*, 151 Pac. (2d) 757 (Colo. June 26, 1944) Reh. Den. Sept. 25, 1944.

Motor Vehicles . . . Accidents . . . Report of Required

In an action testing the validity of a section of the State Motor Vehicle Financial Responsibility Act providing that an owner of a car involved in an accident report the incident to the Secretary of State, held that such a requirement was constitutional and did not infringe upon the rights of the cities to exercise reasonable control over their streets. *Surtman v. Dignan*, 15 N. W. (2d) 471 (Mich. June 30, 1944).

"Cost-of-Living Bonuses" . . . Not Applicable to Supreme Court

Justices of the Supreme Court and employees of that court are not obliged to accept the conditions imposed by the general plan of cost of living bonuses. *Brower v. LaGuardia*, 50 N. Y. S. (2d) 82 (N. Y. Sup. Ct. N. Y. Co. July 6, 1944).

Parking . . . Public Improvement . . . Special Assessment

In action to compel City Clerk to countersign a warrant for payment of costs of publication of an ordinance of intention for the formation of Vehicle Parking District, held that since parking places serve the public and thus are public improvements, special assessments may be levied for such purpose on the property benefited. *City of Whittier v. Dixon*, 151 Pac. (2d) 5 (Cal. Aug. 11, 1944).

Parking Meters . . . Advertisement for Bids for Leasing of . . . No Structural Specifications

Where stage of development of parking meters was such that it was impossible to draw structural specifications upon which competitive bidding might be based, city's advertisement for bids for leasing of parking meters with option to purchase was not invalid on ground that it was so indefinite as to make impossible for fair competition under it. *Hines v. City of Bellefontaine*, 57 N. E. (2d) 164 (Ohio App. Oct. 1, 1943 just released for publication).

Restaurants . . . Obligations to Serve Orderly Person . . . Regulation of

Complaint alleging that defendant restaurant owner refused to serve him food, setting up an ordinance of Salt Lake City regulating restaurants which provided that no orderly person should be refused admission during business hours, held that not to state a cause of action because the city had no power to require restaurants to serve orderly persons and a restaurant is not an "inn" within a statute making it a misdemeanor to refuse to serve a guest. *Nance v. Mayflower Tavern, Inc.*, 150 Pac. (2d) 773 (Utah July 25, 1944).

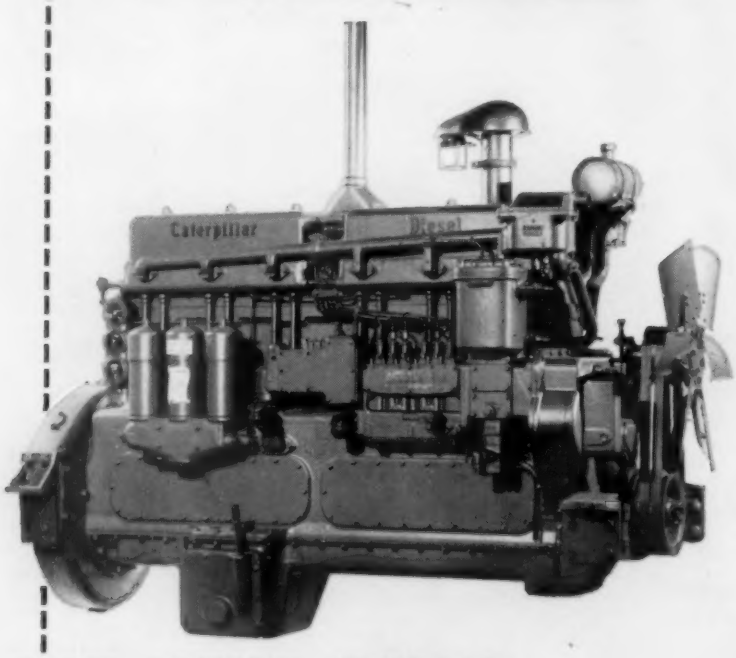
Unlawful Weapon . . .Carrying of Without License . . . Attorney's Statement That Defendant Was a Gangster

On appeal from conviction for carrying a concealed pistol without a license in violation of a city ordinance, held that the over-ruling of defendant's objection to City Attorney's statement, unsupported by the testimony, that defendant was just a gangster was a reversible error. *Brooks v. City of Birmingham*, 19 So. (2d) 74 (Ala. App. Aug. 22, 1944).

Utilities—Franchise Rental Tax

Constitutional provision prohibiting the adoption of special or local laws held to be violated by an ordinance which imposed a license tax on the supplying of electricity and exempting those who had previously accepted certain ordinances and paid a certain franchise rental, under which only one company could at any time qualify for the exemption. *Laclede Power & Light Co. v. City of St. Louis*, 182 S. W. (2d) 70 (Mo. July 3, 1944) Reh. Den. Sept. 5, 1944.

FIRST THING TO THINK ABOUT...



THEN THE FIRST THING YOU CAN FORGET

The engine—heart of the tractor, motor grader, shovel, dragline, compressor, crusher, dredge, electric set — is decidedly the first thing to consider when setting out to buy equipment for the great era of construction work that awaits the "Go" signal.

Pioneer of Diesel engines for tractors and other earthmoving equipment, "Caterpillar" Diesels have undergone more than thirteen years of grueling tests and engineering refinements. They've won their stripes for dependable service on every fighting front; and they've rolled up mighty records on thousands of construction tasks.

*These simple, husky engines are strictly work engines.** Correctly designed, carefully manufactured, and free from ordinary operating adjustments, they can virtually take care of themselves. With the "Caterpillar"-built fuel injection system, their fuel economy is one of their most-talked-of features. Maintenance costs over the years are unbelievably low — for these engines are given every possible protection against wear. They operate efficiently in frigid cold or torrid heat; in the rarefied atmosphere of high altitudes or at sea-level conditions.

Prompt and efficient "Caterpillar" inspection, repair and parts service is always near at hand. While the war has "made holes" in many distribution-and-service systems, the nation-wide "Caterpillar" service-dealer organization has remained intact . . . thoroughly equipped to keep all your earthmoving equipment rolling.

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Conventions—When and Where

Conventions Cancelled

In compliance with the request, issued last month by War Mobilization and Reconversion Director James F. Byrnes that all conventions and trade shows requiring an attendance of more than 50 persons be cancelled, the following conventions previously listed in THE AMERICAN CITY *will not be held:*

American Institute of Electrical Engineers—Northeastern District Technical Meeting, and Summer Technical Meeting
American Society of Public Administrators
American Water Works Association
American Water Works Association—Illinois Section
American Water Works Association—New York Section
American Water Works Association—Southeastern Section
Association of Highway Officials of North Atlantic States
Chamber of Commerce of the United States
Community Chests and Councils, Inc.
National Committee on Housing, Inc.
National Institute of Governmental Purchasing, Inc.
National Public Housing Conference
New Jersey Sewage Works Association
Southeastern Association of State Highway Officials

The other conventions listed on this page are still scheduled to be held, according to the latest report received by THE AMERICAN CITY, *but it is suggested that persons planning to attend the meetings check with the respective organizations for final word.*

Feb. 27-Mar. 1—Grand Rapids, Mich.
CONFERENCE OF HIGHWAY ENGINEERING. Annual Highway Conference. (Hotel Pantlind.) Sec., R. L. Morrison, University of Michigan, Ann Arbor, Mich.

Mar. 9-10—Minneapolis, Minn.
AMERICAN WATER WORKS ASSOCIATION—MINNESOTA SECTION. Annual Conference. (Hotel Nicollet.) Sec.-Treas., R. M. Finch, c/o Wallace & Tiernan Co., Inc., 416 Flour Exchange, Minneapolis, Minn.

Mar. 15-16—Lafayette, Ind.
AMERICAN WATER WORKS ASSOCIATION—INDIANA SECTION. Annual Meeting. (Purdue University.) Sec., C. H. Beckert, 402 State Library Bldg., Indianapolis, Ind.

Mar. 19-21—Toronto, Ont.
AMERICAN WATER WORKS ASSOCIATION—CANADIAN SECTION. Annual Convention. (Hotel Royal York.) Sec., Dr. A. E. Berry, c/o Ontario Department of Health, Parliament Bldg., Toronto, Ont., Canada.

Mar. 28-30—Atlantic City, N. J.
NEW JERSEY MOSQUITO EXTERMINATION ASSOCIATION. Annual Meeting. (Hotel Claridge.) Sec., Thomas D. Mulhern, New Brunswick, N. J.

Apr. 5-6—Columbus, Ohio
AMERICAN WATER WORKS ASSOCIATION—OHIO SECTION. Annual Conference. (Hotel Fort Hayes.) Sec., L. J. Hoffman, 101 Municipal Bldg., Akron, Ohio.

Apr. 9-10—Chicago, Ill.
MIDWEST POWER CONFERENCE. Annual Meeting. (Palmer House.) Dir., Stanton E. Winston, Illinois Institute of Technology, Chicago, Ill.

Apr. 12-13—Lewiston, Mont.
MONTANA SEWAGE WORKS ASSOCIATION. First Annual Meeting. Sec.-Treas., Herbert B. Foote, Division of Sanitary Engineering, State Board of Health, Helena, Mont.

Apr. 13-14—Lewiston, Mont.
AMERICAN WATER WORKS ASSOCIATION—MONTANA SECTION. Annual Meeting. Sec.-Treas., Herbert B. Foote, Division of Sanitary Engineering, State Board of Health, Helena, Mont.

Apr. 13—Washington, D. C.
NATIONAL FIRE WASTE COUNCIL. Annual Business Meeting. (U. S. Chamber of Commerce Bldg.) Sec., H. E. Hilton, 1615 H St., Washington, D. C.

Apr. 30-May 2—New York, N. Y.
AMERICAN SOCIETY OF PLANNING OFFICIALS. Annual Planning Meeting. (Hotel New Yorker.) Exec. Dir., Walter H. Blucher, 1313 E. 60th St., Chicago 37, Ill.

***May 2—Boston, Mass.**
NEW ENGLAND SEWAGE WORKS ASSOCIATION. Spring Meeting. Sec.-Treas., LeRoy W. Van Kleeck, Connecticut State Department of Health, State Office Bldg., Hartford, Conn.

May 7-10—Chicago, Ill.
NATIONAL FIRE PREVENTION ASSOCIATION. Annual Meeting. (Palmer House.) Mng. Dir., Percy Bugbee, 60 Batterymarch St., Boston, Mass.

***May 27-29—Philadelphia, Pa.**
PENNSYLVANIA STATE ASSOCIATION OF TOWNSHIP COMMISSIONERS. Annual Convention. (Hotel Benjamin Franklin.) Sec.-Treas., H. A. Fritschman, Upper Darby, Pa.

"Conventions in Print"

IF the present ODT ban on the holding of large conventions continues through 1945, many organizations may find it advisable to follow the lead of the American Transit Association by substituting a "Convention in Print" for their customary annual conference. This procedure involves a carefully prepared program the papers for which, instead of being delivered orally, are printed in a special issue of the organization's bulletin or in a "Convention in Print" pamphlet for distribution to the membership.

As indicating the wide variety of problems with which forward-looking municipal officials are currently concerned, THE AMERICAN CITY, with the cooperation of the American Municipal Association, has compiled the following alphabetically arranged list of topics which were discussed at the 1944 conventions of the leagues of municipalities of the states indicated:

ADMINISTRATION OF CITIES—Florida, Michigan, Missouri; AIRPORTS AND AIR TRANSPORT—California, Colorado, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, New York, North Carolina, North Dakota, Oklahoma, Pennsylvania, South Dakota, Texas, Wisconsin; ANNEXATION—California; ASSESSMENT—Illinois, Kentucky, Maine, Michigan, Minnesota, New York, North Dakota, Texas, Wisconsin.

BUILDING CODES—Illinois, Kentucky, Minnesota, Oregon.

CIVIL SERVICE—Arkansas, Kansas, New York, North Dakota, Washington.

ELECTIONS—Michigan, Minnesota, Wisconsin.

FEDERAL-MUNICIPAL RELATIONS—Arkansas, Illinois, Indiana, Iowa, Michigan, Missouri, Nebraska, New Jersey, New York, North Carolina, Ohio, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Virginia, Washington, Wisconsin; FINANCE—Arkansas, California, Illinois, Indiana, Iowa, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Montana, New Jersey, North Carolina, North Dakota, Oregon, Pennsylvania, Texas, Virginia, Wisconsin; FIRE-FIGHTING AND INSURANCE—Montana, New Jersey; FRANCHISES—California, Minnesota.

HEALTH AND HOSPITALS—Colorado, Maine, Minnesota, Mississippi, New Jersey, New York, North Dakota; HIGHWAYS—Indiana, Maine, Michigan, Mississippi, Nebraska, New Jersey, New York, Pennsylvania, South Dakota, Texas, Virginia, Wisconsin; HOME RULE—Illinois, Michigan, Minnesota; HOUSING AND SLUM CLEARANCE—Minnesota, New Jersey, Pennsylvania.

JUVENILE DELINQUENCY—Kansas, Maine, Minnesota, Oregon, South Dakota.

LABOR RELATIONS—Illinois, Wisconsin; LEGISLATION—California, Illinois, Indiana, Kansas, Maine, Michigan, North Dakota, Oklahoma, Oregon, Pennsylvania, Texas, Virginia.

ORDINANCES (PREPARATION AND CODIFICATION)—Maine, Wisconsin.

PENSION PLANS FOR PUBLIC EMPLOYEES—California, Illinois, Michigan, Minnesota, New Jersey, New York, North Carolina, Oregon, Texas, Washington, Wisconsin; PLANNING AND PUBLIC WORKS—Arkansas, California, Colorado, Florida, Illinois, Indiana, Iowa, Kentucky, Louisiana, Michigan, Minnesota, Missouri, New Jersey, New York, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Texas, Washington, Wisconsin; PRIORITIES—Michigan, Washington.

RECREATION—Maine, Michigan, Minnesota, North Carolina, North Dakota, Wisconsin; REFORESTATION—Pennsylvania; REFUSE COLLECTION AND DISPOSAL—Michigan, Minnesota, Oregon, Wisconsin.

SEWERAGE—Indiana, Minnesota, Mississippi, Oklahoma, Oregon, Pennsylvania, New York, North Dakota, South Dakota; STREETS AND PARKWAYS—Kansas, Kentucky, Michigan, Maine, Mississippi, North Dakota, Texas; SURPLUS PROPERTY—Kansas, Michigan, Mississippi, Nebraska, Oregon, Texas, Washington.

TAXATION—Colorado, Indiana, Maine, Michigan, Mississippi, Missouri, Nebraska, New Jersey, New York, Oregon, Pennsylvania, Texas, Washington, Wisconsin; TOWN CLERK AND TOWN MANAGER PROBLEMS—Arkansas, Maine, Minnesota, New Jersey, New York, Oklahoma, Virginia, Wisconsin; TRAFFIC AND PARKING—California, Minnesota, New York, Wisconsin.

URBAN REDEVELOPMENT—California, New York, Texas; UTILITIES—Iowa, Kansas, Kentucky, Michigan, Minnesota, Oregon, Texas.

VETERANS—California, Illinois, Iowa, Maine, Michigan, New Jersey, Wisconsin.

WATER WORKS—Colorado, Indiana, Kansas, Minnesota, New York, North Carolina, North Dakota, South Dakota, Wisconsin; WELFARE—Maine, New Jersey.

ZONING—New York, Oregon, Wisconsin.

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Various inflammable liquid fires were touched off and extinguished efficiently with FMC High-Pressure Fog. Those who saw the tests recognized its real value in fire fighting.

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Municipal and Civic Publications

American Municipal Association Conference

THIRD WARTIME CONFERENCE ON MUNICIPAL PROBLEMS.—*Proceedings of the Twenty-First Annual Conference of the American Municipal Association, October 25-27, 1944. Report No. 156. American Municipal Association, 1313 E. 60th St., Chicago 37, Ill. December 1944. 102 pp. $2.00.*

For the third consecutive year the American Municipal Association's conference was devoted to local government in a nation at war. Subjects discussed at this meeting and reported in the Proceedings include, among others, "What of the Cities After the War?" by Mayor Wilson W. Wyatt; "American Cities: The Centers of Democracy," by John B. Blandford, Jr.; "Democracy and the American City," by Dr. Charles E. Merriam; "Disposition of War Housing," by Mayor Harley Knox; "Slums and Blighted Areas," by Walter H. Blucher; "Urban Highway Needs," by G. Donald Kennedy; "Post-War Public Works Planning," by George H. Field; "Surplus War Property," by Col. E. C. Kavanagh; "How Shall Our Cities Be Financed?" by Dr. Harold M. Groves; "National Air Legislation and Airport Plan of the CAA," by George W. Burgess; "Legislative Needs for Aviation and Airports," by Alfred MacDonald; "Retrospect and Prospect," by Louis Brownlow; "Selling the City," by Col. Alexander R. Heron.

Taxation of Federal Property

STATE AND LOCAL TAXATION OF FEDERAL PROPERTY.—*Roy G. Blakey. Published in the Bulletin of the National Tax Association, 111 E. Chestnut St., Lancaster, Pa. January 1945. 13 pp.*

A paper covering the problem of the taxation by local units of government of public land held by the federal government, delivered before the Southern Institute of Local Government and the Tennessee Law Institute, in November. Up until 10 or 12 years ago, this problem had not been serious—but federal measures for combating the depression, which involved expansion of federal property holdings, the acquisition of land for factories, and the expansion of camp sites during this war, have altered the situation. Neither the states nor the local units can impose taxes on federal property unless authorized to do so by Congress.

The author discusses: (1) the amount and character of federal real estate, and the tax question raised thereby; (2) recent problems resulting from New Deal projects and the war; (3) the establishment of the Federal Real Estate Board, its assumptions, principles, and recommendations; (4) the Groves-Gulick-Newcomer Report; and (5) an evaluation of the various plans.

Coordinating Planning Functions

INTERRELATION OF AGENCIES AFFECTING DEVELOPMENT PROJECTS IN NEW YORK.—*Third Public Report of the Committee on Civic Design and Development, New York Chapter of the American Institute of Architects, 115 E. 40th St., New York 16, N. Y. September 1944. 15 pp.*

The third in a series of reports entitled "Some Basic Redevelopment Problems." Drafted by Robert C. Weinberg, with the cooperation of the Committee on Civic Design and Development, this report indicates the need of simplifying and coordinating activities of planning agencies. It discusses the "complexities, uncertainties, conflicts, and resultant difficulties which some 25 different uncoordinated agencies today add to the essential problems of redevelopment which must be solved by architects, engineers, owners, financiers, and real estate interests as well as officials themselves, in the successful planning of any large constructional project in New York City and its environs."

Circus Fire Regulations

CIRCUS REGULATION BY MUNICIPALITIES. — *By Charles H. Burton. Report No. 110. National Institute of Municipal Law Officers, 730 Jackson Place, N. W., Washington 6, D. C. 1944. 32 pp. $2.00. Distributed free to members of the Institute.*

A survey of present fire regulations relating to safety precautions in connection with tents and other canvas places of public assembly. As a result of the Hartford, Conn., "flash fire" circus catastrophe on July 7, 1944, the city attorneys throughout the country began to re-examine their own city's fire regulations and determined that these were, in many cases, antiquated and inadequate in the light of modern conditions. Many of these city attorneys requested the NIMLO to make a survey of available material and to prepare a model ordinance on this subject. It is included in this report.

(See "Safer Big Tops," page 15.)

Plans for Southern California Coastline

COASTLINE PLANS AND ACTION FOR THE DEVELOPMENT OF LOS ANGELES METROPOLITAN COASTLINE. *Published by the Haynes Foundation, 2324 S. Figueroa St., Los Angeles, Calif. 1944. 38 pp.*

Prepared by Donald F. Griffin, under the direction of Charles W. Eliot, Director of the Foundation, this illustrated report presents the plans and major projects for the Metropolitan Los Angeles coastline proposed by the various planning agencies, and shows how they interrelate to make a continuous developmental plan for the length of coastline from Topanga Canyon to beyond Balboa in Orange County. The purpose of the report is to let the citizens of the community see what is proposed and to show what actions can now be taken by groups and by individuals to get the projects which they desire carried out.

(See page 78 of this issue.)

Municipal Debt Change

A RECORD OF DEBT CHANGE IN THE 91 LARGEST CITIES OF THE UNITED STATES.—*By Donald S. MacFadden. Blair & Co., Inc., 44 Wall St., New York 5, N. Y. December 1944. 7 pp.*

Undertaken as a service to the investor in municipal bonds, this study makes possible a quick review of progress of the various cities by a direct comparison of basic factors over the period from 1935 to 1944. It has been found, in this study of all cities of 100,000 population or more (91, excluding Washington, D. C.), that their total direct debt amounts to 52.8 percent of the total public debt, federal and state indebtedness excepted; and that the total debt of these 91 cities represents 73.1 percent of the total debt of all cities, towns, villages, and boroughs in the country. Accordingly, the findings recorded in this report establish the direction of underlying trends throughout the entire municipal field.

Need for Social Action and Reform in Scotland

OUR SCOTTISH TOWNS—EVACUATION AND THE SOCIAL FUTURE.—*Edited by M. G. Cowan. Scottish Women's Group on Public Welfare. William Hodge & Co., Ltd., 86 Hatton Garden, London, E.C.1. 45 pp. 35c.*

A description of the poverty and neglect of some of the larger Scottish towns, designed to stimulate ameliorative action. The material has mainly been drawn from the cities of Edinborough and Glasgow and surrounding communities, and was brought to light during the evacuation period. Recommendations have been put forward, some falling within existing legislation, others requiring additional legislation—all drawing attention to fundamental principles of social action and reform.

Neighborhood Planning

YOU AND YOUR NEIGHBORHOOD: A PRIMER FOR NEIGHBORHOOD PLANNING.—*By Oscar Stonorov and Louis I. Kahn, Architects, A.I.A. Revere Copper and Brass, Inc., 230 Park Ave., New York 17, N. Y. 1944. 90 pp. Illus.*

Concerning itself with stimulating interest in better living and low-cost housing, Revere Copper and Brass, Inc., is now, for the third year, presenting to the public through popular booklets the ideas of leading architects and designers on these subjects. Since the process of city planning is incomplete without intelligent citizen participation, the most recent brochure points out and illustrates some of the basic factors in city planning—in particular, neighborhood planning related to the community as a whole—and advocates the formation of a neighborhood planning council by leading citizen groups of a neighborhood. It suggests what steps might be taken to create such a council and the effective way such an organization might go about recommending improvements ultimately to the city planning commission of the larger community.

(See page 7 of this issue.)

OWI 16 mm. Films

U. S. GOVERNMENT WAR INFORMATION FILMS: 16MM. SOUND.—*Office of War Information, Bureau of Motion Pictures, Washington 25, D. C. 1945. 25 pp. Available on request.*

A complete listing of all 16mm. films released by the Office of War Information. It includes descriptions of 94 films and the addresses of the 281 distributors in the 48 states from whom these films may be obtained. These films are supplied by the Government to inform the American people of the status and progress of the war, and they cover the fighting fronts and the home front and build an understanding and respect for our Allies.

Laws Affecting Minors

A COMPENDIUM OF LAWS AND ORDINANCES AFFECTING MINORS.—*By Alvin G. Rowe, Director of San Diego Department of Social Welfare. Published by San Diego County Coordinating Councils, San Diego, Calif. 1944. 4 pp.*

A digest of existing ordinances in the City and County of San Diego and the laws of the State of California which young people frequently break. By acquainting young people with these statutes, it is believed that juvenile delinquency will be reduced to some appreciable degree.

Jewish Neighbors

GETTING ACQUAINTED WITH JEWISH NEIGHBORS. *By Mildred Eakin. The Macmillan Co., New York. 1944. 105 pp. $1.00.*

A brief study of religious beliefs and customs of the Jewish people in the expectation that Christian children, utilizing this in class projects, will come to understand their Jewish neighbors.

Interracial Tensions

NEGRO PROBLEMS CONFRONTING NATION.—*By Barry Bishop. The Dallas Morning News, Dallas, Texas. 31 pp.*

A series of ten articles written by a staff member of the Dallas News and published therein to set forth the relations between Negroes and whites as observed in his tour of Chicago, Detroit, Pittsburgh, Philadelphia, New York City, Cincinnati, and Richmond, Va. Practical steps towards a solution proposed by southern leaders to meet the southern problem are set forth. An admirable report full of astute and seasoned observations.

(See page 78 of this issue.)

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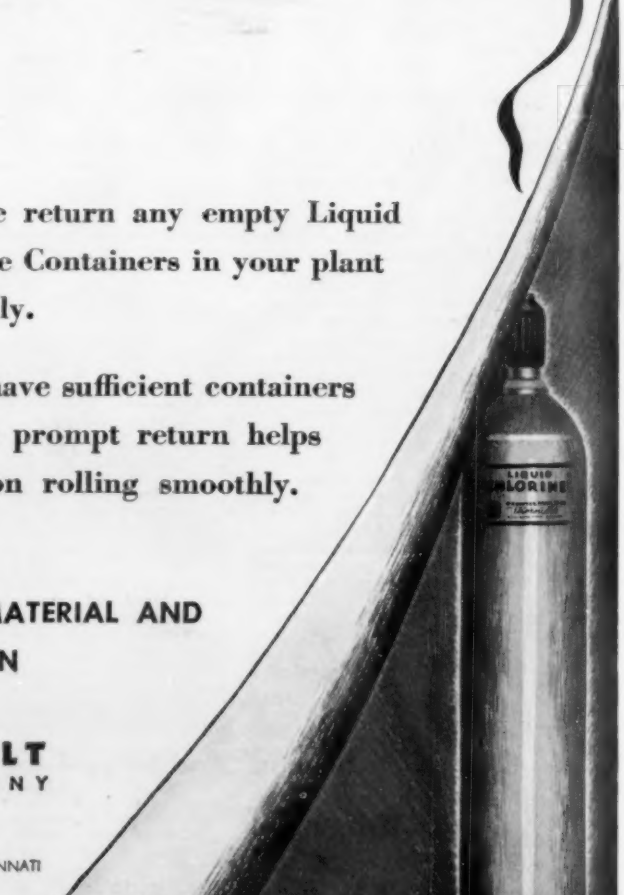

Urban Travel

ANALYSIS OF URBAN TRAVEL BY SURVEY TECHNIQUE.—*Reprint of an article by Thomas H. MacDonald, Commissioner of Public Roads. American Transit Association, 292 Madison Ave., New York 17, N. Y. 1944. 16 pp.*

In view of the Federal-Aid Highway Act recently enacted by Congress appropriating $1,500,000,000 for the construction and reconstruction of streets and highways throughout the nation, Commissioner MacDonald's article justifying the expenditure of these funds by traffic facts is especially interesting at this time. The Public Roads Administration procedure for assembling, analyzing, and interpreting the facts relating to the circulation and distribution of people and goods within urban areas is described in this booklet, and it sets out to prove that the public's travel habits can be most adequately analyzed by "opinion surveys."

Local Government in England and Wales

LOCAL GOVERNMENT IN ENGLAND AND WALES DURING THE PERIOD OF RECONSTRUCTION.—*Ministry of Health. British Information Services, 30 Rockefeller Plaza, New York 20, N. Y. 1945. 10 cents.*

Presented by the Minister of Health to Parliament in January 1945, this paper is a general outline of proposals relating to the reform of local governments in England and Wales. It advocates the establishment of a local government boundary commission to undertake the task of adjusting local government area and status to meet changing conditions.

Urban Growth

CITIES IN SOCIETY.—*Municipal Studies No. 23. Bureau of Municipal Research, University of Texas, Austin, Texas. 1945. 30 pp.*

The objective of this pamphlet, according to Stuart A. MacCorkle, Director of the Bureau of Municipal Research, is "to present to the citizen the growth of our cities, their role in society, and some of the problems of the urban community, with the hope that this material will become a part of the general thought of the citizenry and in this way make for better community life." With particular reference to Texas cities, this report discusses various aspects of urban development in the United States—metropolitan districts, transportation centers, centers of commerce and industry, cultural and governmental centers—under the headings "The Role of Cities in Our National Life" and "The Problems of City Life and Government."

Rhode Island Finances

LOCAL FINANCES IN RHODE ISLAND.—*By A. E. Buck. Public Expenditure Council, 152 Westminster St., Providence 3, R. I. December 1944. 12 pp.*

The first of a series to be prepared by the Institute of Public Administration of New York for the Public Expenditure Council of Providence, a citizens' organization devoted to informing the public on the conduct of governmental affairs. Its aim is to stimulate public opinion to a point where it will strengthen the effectiveness of local governments.

Commercial Advertising in Rural Areas

RETROACTIVE ZONING—*The Legal Principle and Its Application for the Elimination of Rural Billboards.—A preliminary report prepared by the California Roadside Council, Box 4450, San Francisco 1, Calif., with the cooperation of Albert S. Bard, of New York, Counsel for the National Roadside Council. October 1944. Mimeo. 22 pp.*

Interested in the protection of roads and highways in rural sections of California, the California Roadside Council urges the elimination of non-conforming outdoor advertising through legal measures. Citing some practical examples of successful efforts in other states to combat this problem, this booklet insists on the full enforcement of laws which certain billboard interests now flout.

State-Municipal Shared Taxes

SHARED TAXES: STATE-MUNICIPAL.—*By Leo Day Woodworth. American Municipal Association, 1313 E. 60th St., Chicago 37, Ill. November 1944. 26 pp. 12 tables. $1.00.*

A study of taxes collected by agencies of the state governments and shared with the local governments in each state, including ad valorem taxes; net income taxes; transaction taxes; liquor taxes, licenses, profits; and highway taxes, licenses, and fees. Basic financial statistics were derived from materials collected but hitherto unpublished by the Bureau of the Census.

Distribution of State-Collected Taxes

DISTRIBUTION OF STATE-COLLECTED TAXES SHARED WITH CITIES AND TOWNS IN THE COMMONWEALTH OF MASSACHUSETTS.—*Prepared for Massachusetts Special Commission on Real Estate Taxation and Related Matters. Massachusetts Federation of Taxpayers Associations, Inc., 11 Beacon St., Boston 8, Mass. December 1944. 68 pp. 29 tables.*

The first comprehensive study made of the interchange of funds between units of government in Massachusetts. The aim of this report is to provide a clear picture of the impact of tax distributions on real estate taxation, to point out the fluctuations in dollar amounts from year to year, and to show the effect on different types of cities and towns of the formulas upon which the distributions are made. Fourteen cities and towns in Massachusetts were used as samples in this study, each for its special characteristics.

Housing Reports from Great Britain

DESIGN OF DWELLINGS. *75 pp.* 30c.

PRIVATE ENTERPRISE HOUSING. *55 pp.* 50c.

Issued by the Ministry of Health, Great Britain. British Information Services, 50 Rockefeller Plaza, New York 20, N. Y. 1944.

The first report gives recommendations for the design of dwellings and the reasons for the recommendations. Technical details of building construction and equipment are also covered, and the whole field of housing is linked to the over-all problem in the section entitled: Site Planning and Layout in Relation to Housing.

The second report deals with the background, financial facilities, associations, and post-war situation of private-enterprise housing in Great Britain. The conditions under which private enterprise can most effectively operate are described and pre-war arrangements are criticized. An outline for the transitional period is included and the pamphlet closes with the recommendation that voluntary means of controlling the standard of building be exploited before any compulsory scheme is initiated.

Other Reports Received

ALABAMA.—First Annual Report of the State Planning Board, for the year ending September 30, 1944. Montgomery, Ala. 28 pp.

CAP-DE-LA-MADELEINE, QUE.—Reference and descriptive booklet of the City of Cap-de-la-Madeleine. December, 1944. 34 pp. Illus.

COOK COUNTY, ILL.—Annual Message of Clayton F. Smith, President, Board of Commissioners, and President, Board of Forest Preserve Commissioners. Municipal Reference Library, 1005 City Hall, Chicago 2, Ill. 1944. 160 pp. Available free. Postage 4c to cover cost of mailing.

ESSEX COUNTY, MASS.—Annual Report of the County Engineer. For the year ending December 31, 1943. 16 pp.

NEW HAVEN, CONN.—New Haven's Pension Systems. Report No. 33. New Haven Taxpayers Research Council, Inc., 839 Chapel St., Room 11, New Haven 10, Conn. December 1944. 21 pp.

PASADENA, CALIF.—Annual Report of the City Manager, for the fiscal year 1943-1944. 63 pp.

PORTLAND, ORE.—Annual Report of the City Auditor, for the fiscal year ending June 30, 1944. Prepared by J. O. Bredemeier, Auditor *pro tem.* 127 pp.

WILMINGTON, N. C.—YOUR MUNICIPAL GOVERNMENT.—Annual Report for the fiscal year 1943-44. 35 pp.

DIRECTORY OF TENNESSEE MUNICIPAL OFFICIALS.—The Governmental Reference Service, University of Tennessee, Knoxville, Tenn. December 1944. 42 pp. $1.50. Mimeo.

FACTORS CONTROLLING THE LOCATION OF VARIOUS TYPES OF INDUSTRIES.—By Charles P. Wood. Presented at the Annual Meeting of the American Institute of Planners January 20, 1945. May be secured from the author, c/o Lockwood Green Engineers, Inc., 10 Rockefeller Plaza, New York 20, N. Y. 9 pp. Mimeo.

HOW CITIES PROTECT PEDESTRIANS: PRACTICAL IDEAS USED BY CITIES IN THE PEDESTRIAN PROTECTION CONTEST.—American Automobile Association, Traffic Engineering and Safety Department, Pennsylvania Ave. at 17th St., Washington 6, D. C. 1944. Illus.

A LAYMAN'S GUIDE TO THE TEXAS STATE ADMINISTRATIVE AGENCIES.—By Dick Smith. Municipal Studies No. 22. Bureau of Municipal Research, University of Texas, Austin, Texas. 1945. 237 pp.

PENSIONS FOR COUNTY AND MUNICIPAL EMPLOYEES.—Research Report No. 24. Research Division, Legislative Council of Maryland, City Hall, Baltimore 2, Md. 19 pp.

PROCEEDINGS OF THE SEVENTY-FIRST ANNUAL CONFERENCE OF THE INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. August 28-31, 1944.—Published by Daniel B. Tierney, Secretary, Arlington, Mass. 45 pp.

WARTIME PLANNING FOR PHYSICAL RECONSTRUCTION IN GREAT BRITAIN.—British Information Service, 30 Rockefeller Plaza, New York 20, N. Y. November 1944. 24 pp.

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Please send me a copy of Sharp, Shaw & Dunlop's AIRPORT ENGINEERING on ten days' approval. At the end of that time, if I decide to keep the book, I will remit $5.00 plus postage; otherwise I will return the book postpaid.

Name .....
Address .....
City and State .....
Employed by AC-2-45

KARPARK

PLUS POINTS

PENDULUM ESCAPEMENT Simple strong mechanism that employs most accurate and reliable timing method.

POWER ACTUATED COIN MECHANISM Advanced device that eliminates uncertainty of operation. Saves mainspring power and reduces service calls.

STRENGTH Half inch thicker standards give double the protection.

AUTOMATIC OPERATION Parker only inserts coin, meter does the rest. Result: Less complaints, more revenue.

EXCELLENCE IN CONSTRUCTION Corrosion resisting parts are machine cut and polished for precision and strength.

KARPARK *Automatics*

KARPARK CORPORATION, CINCINNATI 6, OHIO

Write for full information about the Karpark meter. Know all the facts. It will be helpful in making a wise decision.

CUT MAINTENANCE COSTS 75%

Concrete slab maintenance costs can be reduced as much as 75% by the Koehring Mud-Jack Method. The Mud-Jack raises sunken concrete walks, curbs and gutters, driveways, streets, and airport runways eliminating reconstruction costs. Write for the new Mud-Jack Bulletin which is both illustrative and descriptive.

KOEHRING HEAVY DUTY

KOEHRING COMPANY
Milwaukee, Wisconsin

MUD-JACK METHOD

ETNYRE
Street Flushers
"THE MACHINE OF A DOZEN USES"

TEN ETNYRES IN PHILADELPHIA

Ten Etnyres handle an all year 'round job in Philadelphia—keeping streets healthfully clean, cool and refreshing in Summer—plowing snow in Winter (note attachment for snow plow on front of radiator grille). Get "specs" on the Flusher that cleans streets up to 42 feet wide in ONE trip, irrespective of parked cars—see your Etnyre dealer or write us today for complete details!

E. D. ETNYRE & CO., Oregon, Illinois

News and Illustrations

Items of Interest to City, Town and County Officials and Others Concerned with the Economical Construction and Efficient Operation of Public Improvement Undertakings

Mack Appoints New Board Member

J. E. Savacool, Vice-President and Comptroller of Mack Trucks, Inc., Empire State Bldg., New York, N. Y., has been appointed a member of the Board of Directors, according to a recent announcement by L. G. Bissell, Board Chairman. Mr. Savacool has been with Mack since 1913 when he became an accountant in the Chicago branch.

J. E. Savacool

From Chicago he went to the San Francisco branch as Manager of the office. He was then appointed to the home office in New York where he has since remained with the exception of a short time in the Los Angeles branch. In January 1925 Mr. Savacool was elected Vice-President and Comptroller, and he will continue to hold these offices.

Dresser Industries Acquires California Companies

The California State Commissioner of Corporations recently issued his permit authorizing Dresser Industries, Inc., Cleveland, Ohio, to issue 78,209 shares of Dresser common stock in connection with the acquisition by Dresser of three southern California companies.

The companies are Day & Night Mfg. Co., Monrovia; Payne Furnace & Supply Co., Inc., Beverly Hills; and Kobe, Inc., Huntington Park. Dresser will also acquire from Rodless Pump Co., San Francisco, its 5,000 share half-interest in Roko Corp. in exchange for 4,255 shares of Dresser common stock. Upon consummation of the transaction Dresser will completely own Roko.

The Dresser Board of Directors recently voted to split up outstanding Dresser shares on a two for one basis, subject to approval of Dresser shareholders. When this change is approved, the number of Dresser shares to be issued to the stockholders of Day & Night, Payne, Kobe, and Rodless Pump will total 156,418.

Union Metal Enters the Parking Meter Field

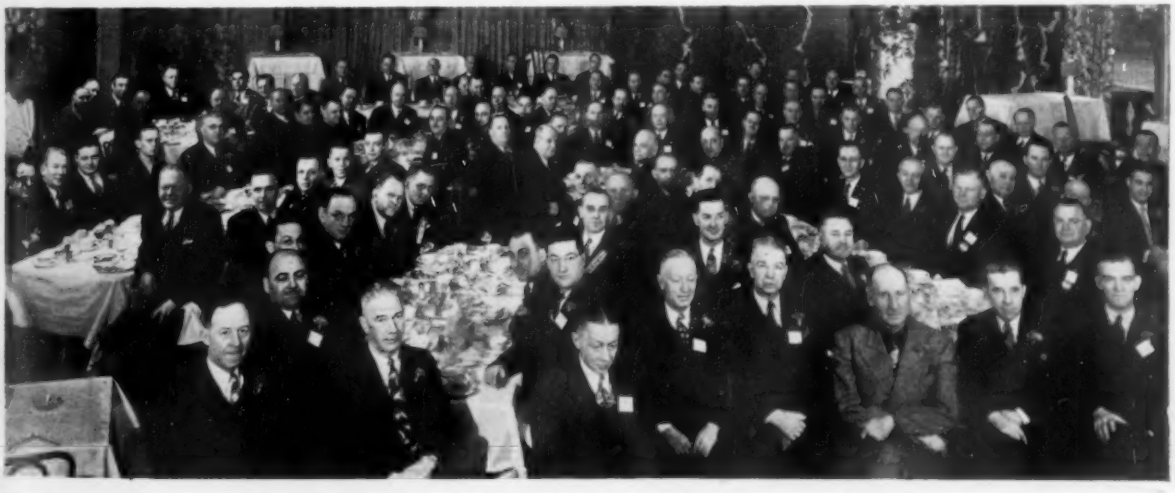
The Union Metal Manufacturing Co. of Canton, Ohio, has purchased certain assets of The Dual Parking Meter Co., whose principal office has been located in Oklahoma City, Okla. The manufacture and repair of Dual meters will be done at Union Metal's main plant in Canton and at The Superior Switchboard & Devices Co., a local subsidiary of Union Metal in Canton. Sales and servicing will be handled by The Dual Parking Meter Co. with offices in the Harter Bank Building, Canton.

Officers of The Dual Parking Meter Co. operating out of Canton are as follows: C. A. Orr, President; W. R. Crusoe, Vice-President; and C. A. Streb, Secretary and Treasurer. Messrs. Orr and Streb are, respectively, President and Secretary of Union Metal. Mr. Crusoe, who has been associated with The Dual Parking Meter business since 1938, will have the active management of Dual.

Union Metal's entrance into the parking meter field is another step in a planned program of product diversification and full utilization of plant facilities after the war. Union Metal is well known in the municipal field being the largest producer of street lighting standards in this country.

The Dual parking meter was the first ever produced and the original installation in the United States was made in Oklahoma City in July of 1935. Because of the war the production of parking meters was discontinued by government order in the spring of 1942, but their value as an aid in traffic regulation was firmly established in the short period between 1935 and 1942. During this time 435 cities throughout the United States adopted the parking meter and approximately 196,000 meters were installed. Dual, as a pioneer in this field, has installed 71,393 meters in 30 of the 48 states.

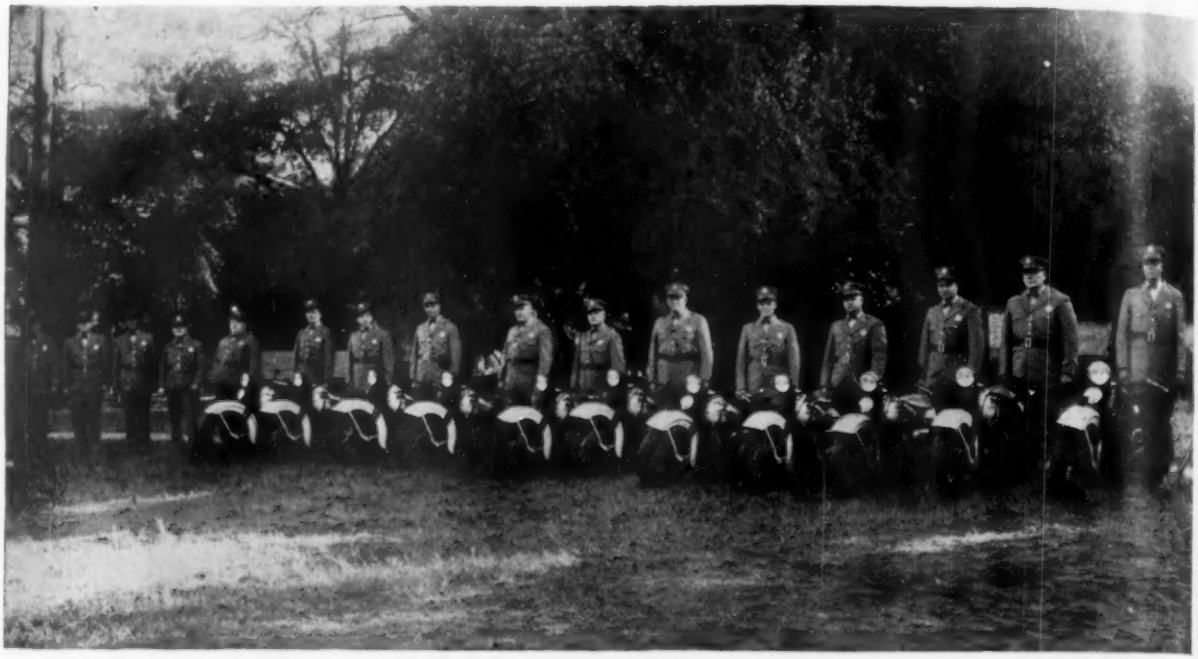
With the possibility of government restrictions being lifted in the not-too-distant future, Union Metal and Superior Switchboard engineers have been working on improvements and refinements of the Dual automatic meter. Improved manufacturing facilities will assure prompt delivery on new meters and fast repair service.



The annual breakfast given by J. D. Adams Co., Indianapolis 6, Ind., for its distributors attending the annual meeting of the Associated Equipment Distributors took place on January 23 at the Edgewater Beach Hotel in Chicago. Pictured at the head table, left to right are: H. S. Griner, Manager of Research and Development; R. C. Hanspeter, Western Division Sales Manager; V. E. Trimble, General Sales Manager; E. E. Christena, Manager Sales Promotion; H. R. Meeker, Executive Vice-President; C. J. Haring, Eastern Division and Export Manager; Buel Wallis, Manager, Washington, D. C., office. Brief talks were given by H. R. Meeker and V. E. Trimble. The Toastmaster was E. E. Christena.

HARLEY-DAVIDSONS Exclusively Since 1911

THAT'S CHATHAM COUNTY'S RECORD

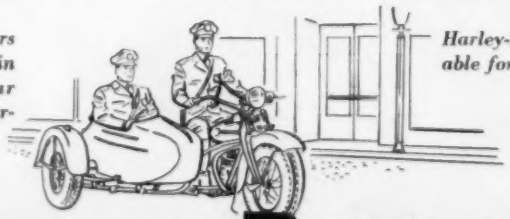


Down Savannah, Georgia way — Chatham County's Police go for Harley-Davidsons in a big way — with an outstanding record of using Harley-Davidsons *exclusively* for 33 years! Their present equipment includes the addition of eight vitally needed 1944 Police Models, as approved under WPB regulations. Chatham County has proved through the years, as many other police departments have, that officers on motorcycles handle traffic control and law enforcement work more efficiently than by any other method.

The superior performance of fast, dependable Harley-Davidsons steps up the effectiveness of police manpower through greater flexibility of action with more frequent coverage of territory. Other important advantages are quicker concentration at scenes of trouble, maintaining closer contact with the public, and achieving more respect and cooperation through constant evidence of uniformed authority.

HARLEY-DAVIDSON MOTOR CO., Milwaukee 1, Wisconsin

Harley-Davidsons with sidecars provide many advantages in the performance of regular and special police duties during the winter season.



Harley-Davidson Motorcycles are now available for vital police needs. See your dealer.

HARLEY-DAVIDSON

Police Motorcycles

★ ON AMERICA'S FRONT LINES OF ACTION ★

New Manager for Ludlow Chicago Office

John L. Sybrandt for many years Manager of the Chicago office of The Ludlow Valve Mfg. Co., Inc., Troy, N. Y., has retired from the organization, according to a recent announcement made jointly by A. W. Thompson, President, and Robert Bischoff, Sales Manager.

GIBSON STUDIOS

Lowell E. Sennet

At the same time Lowell E. Sennet was named to fill this position in the company. Mr. Sennet is an engineer with long and thorough experience in valve applications. He was graduated from Case School of Applied Science and has previously been with the Engineering Departments of the Grinnell Co., Inc., Providence, R. I., and Crane Co., Chicago, Ill.

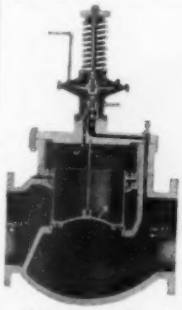
Automotive Concern Purchases Rototiller

Graham-Paige Motors Corp., 8505 W. Warren Ave., Detroit 32, Mich., has acquired the manufacturing rights to Rototiller, according to an announcement made by Joseph W. Frazer, Chairman of the Board. The company will produce this machine as the first of a line of special farm equipment and it hopes by means of mass production to make it available for new uses that will undoubtedly be found for it.

The Rototiller is a farm machine that does the work of plowing, disking and harrowing in one operation, and employs the first new principle developed in many years for seed bed preparation. It thoroughly crumbles the ground to a depth of 12 inches or less by means of rotating tines or edge tools which help propel the machine by their clawing action. This procedure, the company points out, is the opposite of the 'anchor" effect in pulling a plow, disk, or harrow and produces a seed bed which, according to tests, produces earlier and more abundantly with less labor and increased profits.

Exclusive North and South American license rights to manufacture and sell machines of this type, including walking and riding, road-making and heavy-duty farm models, were secured by Graham-Paige from Rototiller, Inc., Troy, N. Y., who will continue to build a small wheelbarrow type model and various attachments.

Graham-Paige plans to make use of the distributor and dealer organization built by Rototiller and to expand these outlets to handle the company's line of farm machinery.



STOP CHECK SINGLE-ACTING ALTITUDE VALVE

★

This valve installed in the upstream line automatically maintains a uniform water level within 3" to 12" variation to prevent any tank overflow; also by means of the internal "stop check" piston assembly, prevents loss or return of storage water back through the valve—making the valve very desirable for use where metered water is purchased, or wherever it is imperative that there be no possible return flow.
This valve may be fitted with "Differential" Control for delayed opening, if desired.
Write for Specifications

GOLDEN-ANDERSON VALVE SPECIALTY CO.
Fulton Building Pittsburgh, Pa.

NATIONAL METHOD

What Does This Mean?

This trade mark "National Method" means to water works men the method of restoring their water mains to 95% of their original capacity, at a cost obviously 'way below that of purchasing and installing new pipe —a time-honored procedure that has been practiced successfully in every part of the country for 38 years by National Water Main Cleaning Co.

May our skilled technicians at the nearest office, near your city, confer with you regarding your own requirements?

NATIONAL WATER MAIN CLEANING CO.
Main Office: 30 Church St., New York 7

CHICAGO 6, 205 Wacker Dr. W. | OMAHA 5, 3812 Castellar St. | BIRMINGHAM 3, 607 1st Natl. Bank Bldg. | ATLANTA 3, 1225 Mortgage Guarantee Bldg. | JACKSONVILLE 1, P. O. Box 683
ST. LOUIS 17, 7103 Dale Ave. | BOSTON 13, 115 Peterboro St.
RICHMOND 19, 210 Franklin St. | KANSAS CITY 2, 3707 Madison St. | MONTREAL, 2028 Union Ave. | SAN FRANCISCO, 501 Howard St. | WINNIPEG, 576 Wall St.

That there shall be PURE WATER to drink and cook with

Throughout the ages, a pure water source has always been a prime necessity of living.

Nature's own water purification process has always been oxidation.

Ozonation—the modern super-oxidizing process—ADDS NOTHING BUT OXYGEN.

OZONATION

THE TASTELESS WAY TO REMOVE OBNOXIOUS TASTES & ODORS

Throughout the ages, a pure water source has always been a prime necessity of living.

Nature's own water purification process has always been oxidation.

Ozonation—the modern super-oxidizing process—ADDS NOTHING BUT OXYGEN.

Better Tasting, Spring-like, Crystal Clear Water

Our post-war ozonation equipment, backed by the most comprehensive research and development program ever completed in this field, will be: (1) Simple to operate, (2) Rugged and dependable to meet the exacting requirements of water-works practice, (3) Economical and beneficial to operate.

Send for our latest Bulletin No. 105: "Ozone in Water Treatment"

OZONE PROCESSES
INCORPORATED
1500 WALNUT ST., PHILADELPHIA 2

WELSBACH

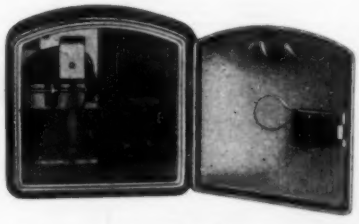
A wholly owned subsidiary of Welsbach Engineering and Management Corporation

CAT. NO. 41EX
Eagle Combination Beacon and Siren Unit also available in adjustable type.

MAN POWER SHORTAGE

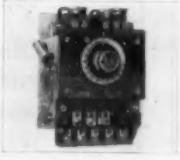
requires utmost safety for undermanned fire departments.

Eagle Combination Beacon and Siren Unit clears the way for apparatus in front of fire station and through the important intersections on fire lane routes.



FLASHER OUTFIT
Cat. No. EP6—Two Circuit

One circuit causes flashing of beacon, the other circuit creates "rise and fall" of siren howl.



TIME LIMIT SWITCH
Cat. No. HX10

Time limit switch is used to "time out" the operation of the Beacon and Siren Unit—adjustments from 2 seconds to 20 minutes in one-second steps

EAGLE

SIGNAL CORPORATION

MOLINE ILLINOIS

Fowler Represents Well-Known Manufacturers

H. D. Fowler Co., 558 First Ave. S., Seattle 14, Wash., represents the following manufacturers in the water works and sewage disposal fields in the states of Washington, Oregon, Idaho and western Montana.

HARTSOOK STUDIO
H. D. Fowler

Atlas Mineral Products Co., Mertztown, Pa.

Ford Meter Box Co., Wabash, Ind.

Johnston & Jennings Co., Rusta Restor Division, 861 Addison Rd., Cleveland 14, Ohio.

Keasbey & Mattison Co., Century Pipe Division, Ambler, Pa.

Lakeside Engineering Corp., 222 W. Adams St., Chicago 5, Ill.

Pelton Water Wheel Co., 19th & Alabama Sts., San Francisco, Calif.

Simplex Valve & Meter Co., 6741 Upland St., Philadelphia 42, Pa.

Vapor Recovery Systems Co., Compton, Calif.

Water Leak Detector Co., Columbus, Ohio.

In addition Mr. H. D. Fowler acts as Manager of the district offices in Seattle for:

The Chapman Valve Mfg. Co., Indian Orchard, Mass.

Pittsburgh-Des Moines Steel Co., 3412 Neville Island, Pittsburgh, Pa.

Mr. Fowler was Superintendent of the Water Department of Seattle for several years before going into business for himself.

Heil Opens Northwest District Office

The Heil Co., Milwaukee, Wis., announced recently the opening of a northwest district sales office in the White-Henry-Stuart Building at 1338 Fourth Ave., Seattle 1, Wash.

The new offices will be under the direction of John Barclay who has been associated with the company for many years, and will provide sales assistance for Heil dealers and distributors in Washington, Oregon, Montana, Idaho, and Wyoming. Heil products distributed in this territory include truck bodies and hoists, road machinery, transportation tanks, and storage tanks.

Morgan Appointed Walter Truck Representative

George R. Morgan has been appointed factory representative for Walter Snow Fighters and Walter Tractor Trucks in Minnesota, Iowa, Illinois, North Dakota, South Dakota, Michigan, and Ohio, according to a recent announcement by the Walter Motor Truck Co., Ridgewood, Queens, L. I., N. Y. Mr. Morgan's headquarters will be at 2647 Queen Ave., No., Minneapolis.

Mr. Morgan was formerly connected with the Iowa Highway Commission as Assistant Resident Engineer, with the National Park Service and U. S. Army at Omaha, Neb., as Equipment Engineer, and with the WPB regional office in Minneapolis as Construction Machinery Specialist.

Consulting Engineer Opens Boston Office

George W. Coffin, consulting engineer, has announced the opening of his new engineering office at 68 Devonshire St., Boston 9, Mass.

Mr. Coffin specializes in water and sewerage works, flood control and drainage, chlorine sterilization of water systems, reservoir treatment, and algae control.

He has been engaged in engineering in Boston for many years, principally with the Massachusetts Department of Public Health and with the Boston Metropolitan District Water Supply Commission during the construction of the new Quabbin Reservoir and Aqueduct system.

During the recent construction of the Naval Advance Base Depot at Davisville, R. I., he was sanitary engineer in charge of the design of the water supply for this facility which was constructed to serve Camp Endicott and the Quonset Point Naval Air Station.

SPARLING MAIN-LINE METERS

Sparlings measure the 16-foot Jobs at Chicago's South Side Filtration Plant—and 2-inch mains from coast to coast.

Figure on Sparling Meters for Your Main Lines for

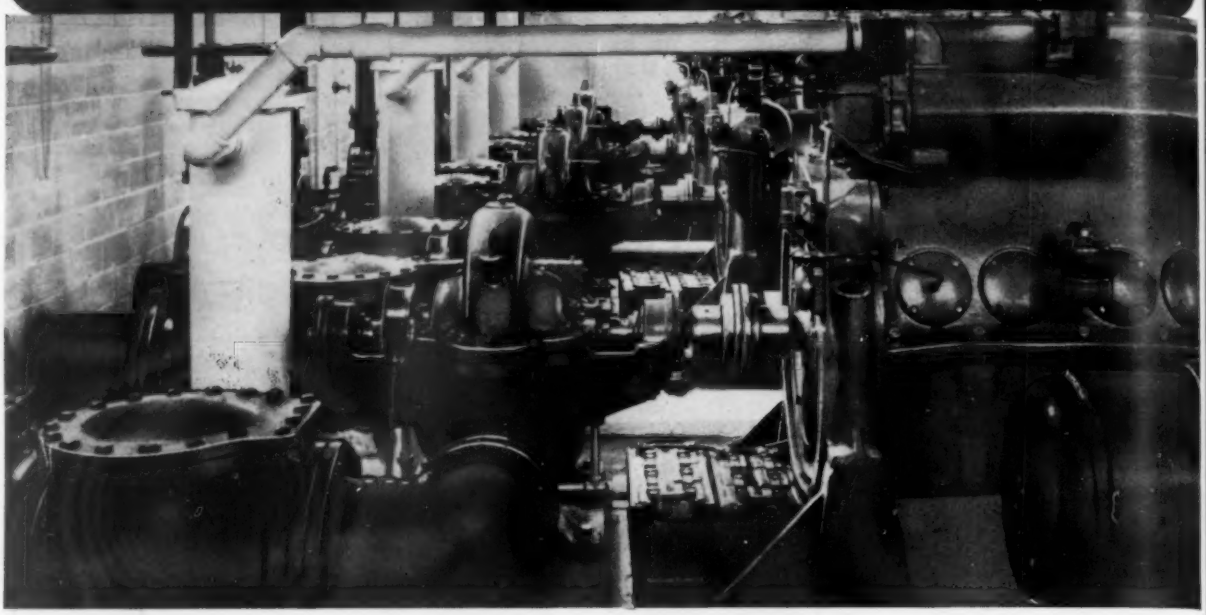
Consistent Accuracy
Lowest Pressure Loss
Easy Installation

Bulletin 308 comes on request

P. W. SPARLING — *Manufacturer of Water Measuring Equipment*

LOS ANGELES 54—Box 3277 Terminal Annex
CHICAGO 16—3104 South Michigan Ave.
BOSTON 8—6 Beacon Street
622 Broadway—CINCINNATI 2
101 Park Avenue—NEW YORK 17

MORRIS PUMPS *with direct diesel drive exceed planned output by 13%*



This battery of Morris Pumps in New London, Conn. adds 150 million G.P.D. to city's water supply. Completed August, 1944.

IN THIS modern pumping station, four Morris double-suction, horizontally split centrifugal pumps, specified for 1750 gpm each, actually deliver up to 2000 gpm—approximately 13% plus capacity—without over-loading the engine. Driven by 150 hp diesel engines, each unit pumps against 125 foot total dynamic head, at a speed of 1140 rpm.

An interesting mechanical departure in this installation is the omission of gears between engine and pump. But without this intermediate gearing common to diesel drive, Morris hydraulic engineering met and surpassed requirements. Economically, too—only four mills fuel cost per 1000 gals., at 1140 rpm.

New England has always favored the efficiency, economy and stamina of Morris Pumps. Among the numerous installations by the Starkweather Engineering Co., of Newton, Mass., Morris representatives, are:

Bangor Airport, Me.
Grenier Air Field, N. H.
Cities of Concord, N. H.
Dover, N. H.
Chicopee, Mass.
Haverhill, Mass.
Hartford, Conn.
Keene, N. H.
Lynn, Mass.
New Bedford, Mass.
Springfield, Mass.
Waterville, Me.
Woonsocket, R. I.
Bristol, R. I.
Brookline, Mass.
Concord, Mass.
Fairhaven, Mass.
Milton, N. H.
Nahant, Mass.
Nantucket, Mass.
Raymond, N. H.
Scituate, Mass.
Warren, R. I.
West Springfield, Mass.
Leominster, Mass.
Newport, R. I.
Town of Saugus, Mass.
Waterville, Me., District
Metropolitan District
South Essex Sewage District

MORRIS MACHINE WORKS
Baldwinsville, N. Y.
Branch Offices in Principal Cities

MORRIS **CENTRIFUGAL PUMPS**

Worthington Pump Elects New Officers

The Board of Directors of Worthington Pump and Machinery Corp., Harrison, N. J., at a meeting in New York on December 21, 1944, elected Clarence E. Searle, President of the Corporation. Mr. Searle succeeds Harry C. Beaver who was elected Vice - Chairman of the Board of Directors, and Chairman of the Management Committee.

Clarence E. Searle

Mr. Beaver has been President of the Corporation since 1931, and Mr. Searle, Vice - President in Charge of Sales since 1932, when he joined the Worthington organization. He came to Worthington following a long period of service in various executive capacities with the Allis-Chalmers Mfg. Co. of Milwaukee, Wis.

Hobart C. Ramsey

Hobart C. Ramsey, Vice-President in Charge of Operations, was elected Executive Vice-President.

Edwin J. Schwanhausser, Vice-President in charge of the corporation's manufacturing and sales operations in Buffalo, was elected Vice-President in Charge of Sales.

Edwin J. Schwanhausser

Leslie C. Ricketts, Manager of the corporation's Harrison works, was elected a Vice-President.

All of these elections became effective January 1, 1945.

Fourth Production Award for Chain Belt

Chain Belt Co., Milwaukee, Wis., recently made the following announcements concerning its organization:

Employees of the company have been awarded their third Army-Navy "E" star. The company received its original Army-Navy "E" pennant award on September 19, 1942. In addition to its regular products which are distributed among other producers of war equipment, Chain Belt has made since 1941 medium-size howitzers, pack howitzers, 120 mm anti-aircraft guns, field guns, refuse grinders for transports and landing barges, tank turrets, gun shields, traction shoes for amphibious landing craft, and ammunition hoists for other naval units.

M. D. Moody, A. C. L. Warehouse #2, Riverside Viaduct, Jacksonville, Fla., has been appointed distributor of Rex construction machinery in the Jacksonville area. Mr. Moody has been in business in Florida for the past 28 years and is well known among contractors and construction men. His son, M. D. Moody, Jr., will be associated with him. Besides handling the complete line of Rex construction machinery including pavers, mixers, pumps, pumpcretes and Moto-mixers, Mr. Moody will carry a large stock of Rex parts.

Harold I. Kurtz, formerly of the Bureau of Repairs and Utilities Branch, War Department, recently joined the staff of the Chain Belt Co. as a Sanitary Engineer. Before his association with the War Department, Mr. Kurtz was a sanitary engineer for the City of Butler, Pa., as well as a chemical engineer in the Bureau of Sanitation at Bluefield, W. Va.

THIS PUMP HAS WON ITS

Service Ribbon, too!

NEXT to food, nothing on the battlefront is as refreshing as a cup of cool, pure water. Thousands of Peerless Pumps have gone to the battlefronts. Wells are hastily drilled so that our boys will not be exposed to the hazards of bacteria or poisoned water. The simplicity of Peerless Hi-Lift and Turbine Pumps, their compactness, dependability and ease of installation make them first choice on the battlelines. Here at home Peerless Pumps have also won their *Service Ribbons.* Right through wartime they have given unfailing service. Many Peerless Pumps have operated 24 hours daily for years without shutdown, without a penny spent for repairs. In considering your plans for a better water supply, we invite you to share Peerless experience and success.

Capacities . . . 10 to 220,000 gallons per minute!

Designers of the famous fighting "Water Buffalo."

PEERLESS PUMPS

PEERLESS PUMP DIVISION
Food Machinery Corporation

TURBINE
HI-LIFT
HYDRO-FOIL

301 W. Ave. 26, Los Angeles 31, Calif. • 1250 Camden Ave. S.W., Canton 6, Ohio • Other Factories: San Jose 5, Fresno 16, Calif.

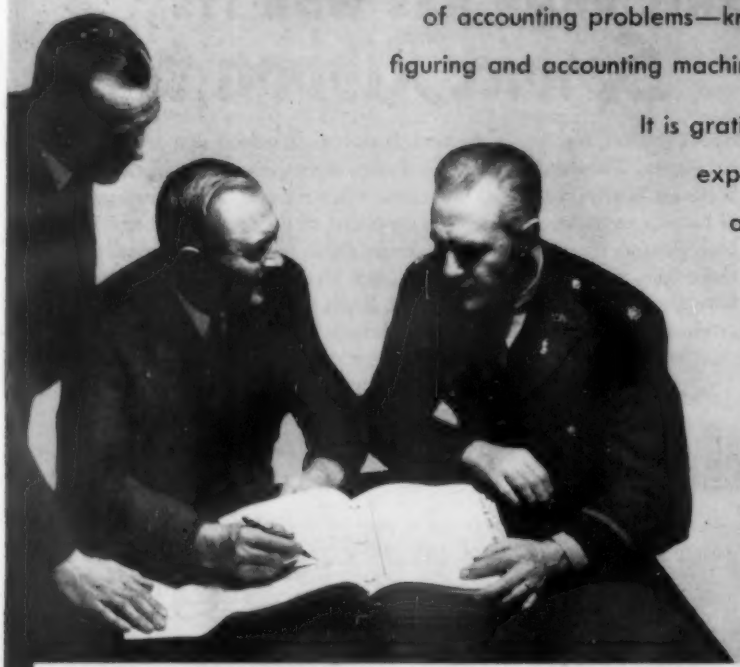
Burroughs Leads . . . . in helping when war accounting problems arise

In war industries, camps, depots, bases and government offices, Burroughs systems and installation men have been working with officers and executives, devising modern machine systems to save accounting time and clerical manpower.

Burroughs men—thoroughly experienced in meeting all types of accounting problems—know how the speed and efficiency of figuring and accounting machines are best applied to this work.

It is gratifying to know that Burroughs' experienced technical staff has been able to make such an important contribution to the war effort.

BURROUGHS ADDING MACHINE CO., DETROIT 32



1st Burroughs

IN MACHINES
IN COUNSEL
IN SERVICE

FIGURING, ACCOUNTING AND STATISTICAL MACHINES • NATIONWIDE MAINTENANCE SERVICE • BUSINESS MACHINE SUPPLIES

A bronze honor roll.

Bronze Plaques and Tablets

Motorists of the nation are familiar with points of historical interest in cities and towns marked carefully with tablets permanently cast in bronze, showing the location of early settlements, designating buildings and bridges, as well as memorials for war heroes.

Albert Russell & Sons Co., Division of Slocum Industries, Inc., 220 Broadway, New York 7, N. Y., has developed a specialized branch of its foundry, giving particular attention to bronze tablets of artistic sculpture and expert casting. The company's knowledge and experience are applied to specific requirements for the most effective solution to every need and problem. The company points out that over 500 tablets are on the battlefield at Gettyburg, and for many years it has turned out tablets commemorating World War I heroes.

Bronze was the metal of ancient civilization. Articles handed down to us through the years are perfectly preserved, having successfully resisted the ravages of time and retained their original beauty.

For the duration the Russell Foundry will be doing war work, but as soon as the government releases bronze for the manufacture of this type of product, the company will resume production of memorials for general use.

Infilco Receives Third Production Award

Employees of Infilco, Inc., 325 W. 25th Pl., Chicago 16, Ill., have for the third time been honored for meritorious production services in the war effort.

In September 1943, they were awarded the Army-Navy "E" flag, the first White Star addition in May 1944, and the second White Star in December 1944.

PLAN YOUR FENCE...

when you plan your project

FENCES should enhance the appearance of public developments. Fence design and layout should form a harmonious part of the entire project. By making Cyclone Fence a feature of your original plan, the danger of marring the landscape is avoided.

Cyclone Fence is strong and sturdy enough to keep out intruders, or to prevent children dashing into the street. Cyclone Fence also is attractive in design. Cyclone is the world's most widely used protection fence for power plants, reservoirs, water works, transformer stations, city quarries, schools and playgrounds.

Our engineers are experienced in designing fences to give the best protection combined with harmonious effects. Over fifty years of leadership in the fence industry is behind their advice and judgment. These fence experts are available for consultation without obligation on your part.

SEND FOR FREE 32-PAGE BOOK

In the meantime, mail the coupon for our 32-page book on fence. Full of facts and specifications. Profusely illustrated. Complete information on different types of fence, gates, athletic field equipment, etc. Whether your plans are to be carried out now or in the future, you need this free book.

CYCLONE FENCE DIVISION
(AMERICAN STEEL & WIRE COMPANY)
Waukegan, Ill. · *Branches in Principal Cities*
United States Steel Export Company, New York

CYCLONE FENCE DIVISION · American Steel & Wire Co.
USS CYCLONE FENCE
UNITED STATES STEEL

Cyclone Fence
Waukegan, Ill., DEPT. B25
Please send me, free of charge, your 32-page book on Fence.
Name.....
Address.....
City..... State.....
Title or official capacity.....

UNITED STATES STEEL

The kind of service Texans enjoy!

The beautiful and stately Municipal Building at Austin, Texas, and the Kardex Customer History Record it houses are alike symbols of modern perfection in civic operations.

KARDEX Centralized Utility Customer Records help set high standard in City of **AUSTIN**

Customer good will, savings in clerical labor and the elimination of many sources of error and loss are three big advantages—three reasons why municipal officials of Austin, Texas, gladly say their Kardex Customer Records have proved to be "a very worthwhile investment".

In this rapidly growing State capital, increasing record-keeping and record-reference needs have been easily met by *centralizing* Customer History, Customer Service, Meter History and Meter Test Records, thus obtaining the full benefit of Kardex *Visible* speed and accuracy.

Inquiries and service requests are handled quickly, efficiently, accurately, promoting a maximum of customer satisfaction. Collections are established on a selective basis, no time being wasted in unnecessary activities. Many repeated transcriptions of data formerly necessary are eliminated.

In all phases of operation, positive yet simplified *control* has contributed to the ideals of service and the conservation of assets that mark the most efficient management.

The practical advantages of Kardex *Visible* Systems of Record Control can be applied to the activities in which *you* are most interested. Just call our nearest Branch Office.

FULL DETAILS of Austin's experience with centralized Kardex Record Control are contained in Systems Narrator No. 586. Ask for a free copy today.

SYSTEMS DIVISION

REMINGTON RAND

Buffalo 5, New York

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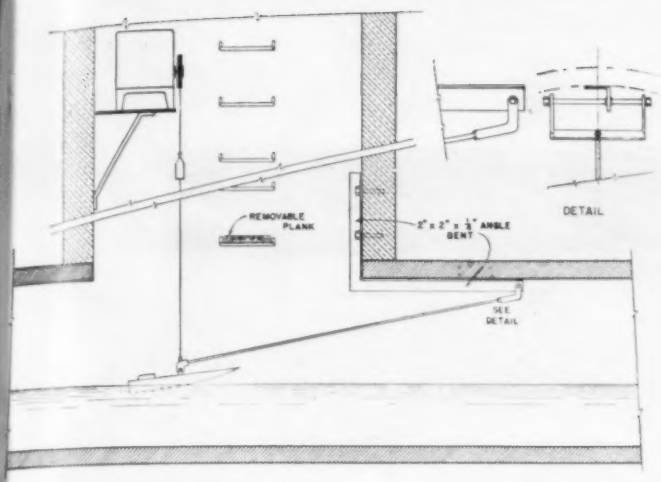


A Stevens type F recorder in a manhole actuated by a scow float

How to Meter Sewage Inexpensively

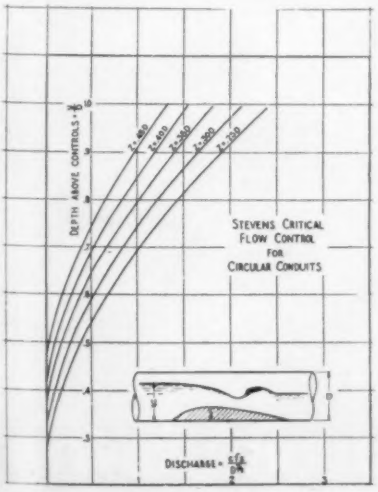
If you have a sewer with a relatively even gradient, and if the sewer is not subject to backwater difficulties, you can meter the flow accurately and inexpensively by any of the methods that measure depth, calibrating this measurement by the Chezy or Manning formula. This was pointed out recently by J. C. Stevens, Engineering Consultant for Leupold & Stevens Instruments, 4445 N. E. Glisan St., Portland 13, Ore.

For recording depths only, Mr. Stevens pointed out that the Stevens Type F recorder has proved reliable. Fully described in this company's bulletin #24, it is portable and makes a graph on a rectangular chart 9.6 by 12 inches between margins. Where flow with or without totalization is desired, the Stevens Type B recorder gives the desired results. It uses a circular chart in which the record is condensed to a 4-nch width from which the discharge can be read with an accuracy of about 2 percent. Bulletin #25 describes this recorder.

Another simple device for measuring flows in circular conduits is the Stevens Critical Flow Control—merely a hump, sometimes referred to as a blister, on the bed of the pipe high enough to produce a critical flow on its summit. Critical flow exists when the velocity head is half the mean depth, and is not affected by tail water as long as the depth is less than two-thirds the head water depth, both measured from the crest of the "blister."

The accompanying chart shows this control together with rating curves for the various heights of the "blister." Depths and flows are for a one-foot pipe. For other diameters, multiply the depth indicated by D to obtain the depth in feet, and multiply the flow indicated by D 5/2 to obtain the flow in cubic feet per second.

Recorders also can be installed in manholes. The scow shown in the accompanying drawing, performs well in sewers of moderate size where there is no danger of the float hitting the bottom. When smaller flows needs to be measured it is often possible to make a float well by the side of the sewer in an existing manhole. Such a well, connected to the sewer, will allow the use of a recorder float.



Stevens Critical Flow Control for circular conduits.

Motorola "Walkie Talkie" on the 5th Army Front

The Galvin Manufacturing Corp., 4545 W. Augusta Blvd., Chicago 51, Ill., recently received word of the outstanding performance of one SCR 300, a Motorola "Walkie Talkie," on the Fifth Army front in Italy, it was announced in a special bulletin issued by the Industrial News Section of the War Department. Sgt. Herbert O. Taylor of Richmond, Va., headquarters communications chief with the veteran 135th Regiment of the 34th "Red Bull" Infantry Division, reports that this is the best type of radio he has used. It has survived two shellings by German artillery; once it was put out of commission but quickly repaired, and the second time the shrapnel ripped the case but did not stop the Walkie Talkie.

"We received this particular set just before we went to the Anzio beachhead," Sgt. Taylor said. "We could operate with it from two to three miles over what was supposed to be the maximum. This set was used in the offensive against Rome, Leghorn, and Pisa."

HEAR YE! HEAR YE!

Freezing nights ahead! Be prepared—with that dependable ear for underground leaks,

The GLOBE GEOPHONE

(Patented)

★ Quickly and accurately locates the leaks
★ No digging
★ Simple to operate
★ No fragile parts to be serviced or replaced

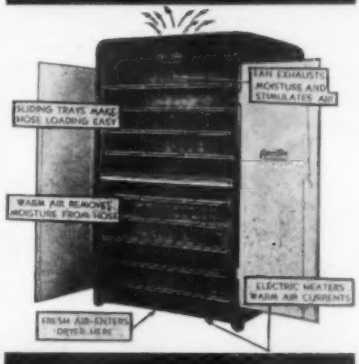
$75 buys the complete outfit: two GEOPHONES, connecting tubes, earphones, in heavy leather carrying case with shoulder straps. Write:

Globe Phone Mfg. Corp.
Dept. H
Reading, Mass.

CIRCUL-AIR

FIRE HOSE DRYER

- Is easier to use
- Saves drying time
- Reduces hose stretch
- Prevents mildew and rot
- Improves building design
- Air-conditions as it dries


FAN EXHAUSTS MOISTURE AND STIMULATES AIR
SLIDING TRAYS MAKE HOSE LOADING EASY
WARM AIR REMOVES MOISTURE FROM HOSE
ELECTRIC HEATERS WARM AIR CURRENTS

THE CIRCUL-AIR CORPORATION
6339 East Palmer Avenue
DETROIT 11, MICHIGAN

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LIFE-HOME-BUSINESS
and INCOME!

INSTALL . . . . . .
A FIRE ALARM BOX
AT EVERY FIRE HAZARD

THE GAMEWELL COMPANY
NEWTON UPPER FALLS 64, MASSACHUSETTS
In Canada: Northern Electric Co. Ltd., Montreal

New Officers Elected by Permutit

W. Spencer Robertson has been elected Chairman of the Board of Directors and Henry W. Foulds, President of The Permutit Co., 330 West 42nd St., New York N.Y. Mr. Robertson has been President of the company for the past 15 years while Mr. Foulds, who has been with the company since 1935, has been Executive Vice-President. Prior to that time, Mr. Foulds had been a Vice-President and Director of Gould Pumps, Inc., and a Vice-President of Servel, Inc.

W. Spencer Robertson

Henry W. Foulds

Both officers assume their new duties at a time when the company is about to resume production of household water softeners. In the municipal and industrial fields, Permutit produces a variety of types of equipment. Among them are hot lime soda softeners, Spaulding Precipitators, Spiractors, and zeolite softeners. Other water conditioning equipment such as filters, iron, oil, color, taste and odor removal systems, coagulation equipment, and power plant specialties, including continuous blowoff systems, combustion recorders, degasifiers and deaerators, are also produced and marketed by the company. Recently, The Permutit Co. developed a seawater desalter which has been adopted as standard lifesaving equipment aboard Army Air Force, Navy, and Air Transport Command aircraft.

Radiant Heating for Outdoor Use

Radiant heating has recently been brought out of doors and used effectively to aid in the shoveling of snow or chopping of ice from walks and driveways. Municipal and county officials interested in the use of this system for snow melting lines at airport runways, driveways, or around buildings having platforms or terminals where snow and ice always present a problem, will be glad to know about two installations recently made.

At the Bethelehem, Pa., works of the Sarco Manufacturing Company, employees had to walk out of doors a considerable distance from the main plant to the cafeteria, and as it was not feasible to erect a covered walk-way, a concrete footpath was installed, with wrought iron heating coils beneath. An ice-free walk resulted. Hot water is circulated through the 1¼-inch pipes for melting the snow which falls on the footpath, and to prevent the formation of ice.

An installation at the Hewitt Rubber Co., Buffalo, N. Y., utilizes low pressure steam from the plant's boiler which is fed into similar size wrought iron pipe coils to melt and remove snow from the loading strip in the plant's yard before the fall has had a chance to pile up. The installation is 80 feet long and 8 feet wide.

During December last a 14-inch snowfall was handled here with perfect efficiency. Not only was the snow melted as it fell, but the heat vaporized the moisture at the same time leaving the driveway dry.

Because of its ease of fabrication, its weldability, its resistance to underground corrosion, and its high heat emissivity, wrought iron pipe is used.

T. Napier Adlam, Vice-President of Sarco, who was instrumental in this installation at his company, is convinced that similar applications will be made on a much larger scale under the runways and landing strips at airports. The immediate melting of the snow not only would expedite the landing and taking off of planes but, because most landing strips are black, the actual landing of planes would be made safer because of the visible contrast between the dark strip and the snow-covered ground beside it.

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Plus a complete stock of over 100,000 service parts, tools, equipment, supplies and accessories to service or recondition gasoline and Diesel motors, pumps, compressors and other mechanical units. A completely equipped machine shop with precision-trained personnel assures prompt intelligent service on many maintenance problems!

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35th Floor, 8 South Michigan Avenue, Chicago 3, Illinois

Who is Right?

QUIZ QUESTION: What is Addressograph?

"Addressograph is a business system for writing payroll information. We have used it for several years."

"We use Addressograph in our factory office for speedily writing production forms. I think it's a production control system."

"I would define Addressograph as a system which puts information to be written more than once on metal plates so that it can be reproduced quickly *and with* 100% accuracy."

"I think Addressograph is equipment for addressing envelopes, magazines, and other mail."

"Addressograph is a method for writing job tickets, parts identification, etc. At least that's what we use it for in our plant."

Here is the Correct Answer:

Every one of these answers is right! As far as it goes. Actually, Addressograph simplified business methods save time, cut costs, and guarantee accuracy *wherever* paperwork is done. Addressograph fits itself into small business and large, into every department—takes over the complete job of writing anything which must be written more than once.

Why not start a treasure hunt in your business—search out ways to improve efficiency in office and factory? Our Research and Methods Department will help you, show you how Addressograph simplified business methods are cutting corners for others in your industry. Telephone our local agency or write Addressograph-Multigraph Corp., Cleveland 17, O.

Addressograph

TRADE-MARK REG. U.S. PAT. OFF.

SIMPLIFIED BUSINESS METHODS

Addressograph and Multigraph are Registered Trade Marks of Addressograph-Multigraph Corporation

FRONT ROW, LEFT TO RIGHT: *Mrs. Fred G. Wittig, Mrs. Milton M. Yarrington, Mrs. George P. Kittel (Guest of Honor and wife of the President of the company), and Mrs. Gustave Graff.*

SECOND ROW, LEFT TO RIGHT: *Fred Wittig, Plant Supt.; Milton M. Yarrington (Master of Ceremonies); Gustave Graff, Treas.; and Lt. Col. R. J. Desmond of the Army Engineers.*

Army-Navy "E" for Aeroil Burner

Employees of the Aeroil Burner Co., Inc., West New York, N. J., were presented with the Army-Navy "E" Flag on December 28 at the Memorial High School.

Milton M. Yarrington acted as master of ceremonies and introduced Lt. Col. R. J. Desmond of the Army Engineers, and Lt. Comm. Harold R. Ten Eyck of the Navy who saw action on the carrier Essex from the time it was commissioned until a few weeks ago. These men presented the "E" flag and "E" pins, respectively.

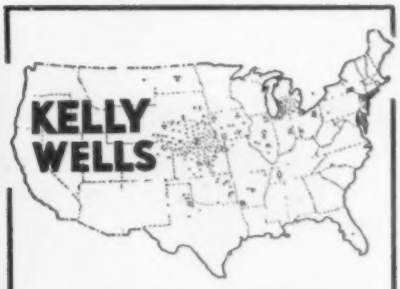
In speaking of the company's work, Lt. Col. R. J. Desmond expressed the appreciation of the War Department "for the outstanding job that you have accomplished," and assured the employees that "the asphalt heating equipment turned out by your company helps the engineers to repair air fields in Europe and the Pacific in unbelievable, record-breaking time." Both members of the Armed Forces stressed the fact that the war was far from won, and that production could not relax for a moment without severe consequences.

A dinner-dance for more than 500 persons was held the same evening at the Hotel McAlpin in New York.

PEMCO Acquires Floodlighting Business

Philadelphia Electrical and Manufacturing Co., 1206-36 North Thirty-First St., Philadelphia 21, Pa., annnounces that it has succeeded the Electric Service Supplies Co. of Philadelphia in the manufacture and sale of Keystone Golden Glow Floodlighting Equipment for area and display floodlighting.

This equipment will now be known as PEMCO Golden Glow Floodlighting.



ALL OVER THE MAP!

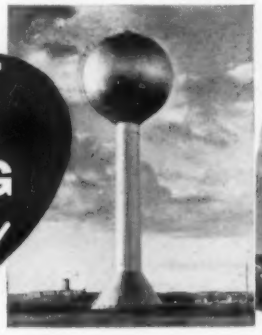
For 25 years Kelly concrete cased wells have stood the test of time. We have several thousand now in service, covering a territory of 33 states and parts of Canada.

Kelly concrete cased wells are especially adapted for developing large water supplies from sand and gravel formations.

We Guarantee our wells to develop all available water, sand free, to their full capacity.

KELLY WELL CO., INC.
Grand Island, Neb.

PREVENT TANK RUSTING *Electrically*



Modern, service-proved Rusta Restor method . . . using safe, low voltages . . . gives lasting protection . . . for the cost of just one good paint job.

● Like hundreds of others from coast to coast, your tanks too can get lasting protection against rusting with Rusta Restor. Not a "magic" but the thoroughly proven cathodic (i.e. electrical) process, Rusta Restor maintains the tank in an "electronegative" or "neutralized" state that *prevents* rusting. Modest in first cost . . . Uses the current of only one light bulb. Send for full details today.

RUSTA RESTOR
THE PROVEN CATHODIC (i. e. ELECTRICAL) RUST PREVENTIVE
A DIVISION OF
THE JOHNSTON AND JENNINGS COMPANY
861 ADDISON ROAD . . . CLEVELAND 14, OHIO

OCECO VAPOR CONSERVATION AND FIRE PREVENTION EQUIPMENT FOR VOLATILE LIQUID STORAGE TANKS . . . STOWE STOKERS . . . HAMMERED FORGINGS

SUNDSTRAND AUTOMATIC TAX BILLING MACHINE

. . . can also post appropriation ledger accounts and prepare budget reports reflecting today's transactions

with the capable smoothness and speed with which it prepares tax bills and posts tax payments. The operator merely picks up or enters in the machine the four old balance amounts—(1) total appropriation, (2) unencumbered balance, (3) balance of unpaid encumbrances, (4) total expenditures—and then enters the item or items to be posted. (This operation remains constant for every type of posting.) Sundstrand completes the job by automatically computing and printing the following new balances or totals: (1) total appropriation, (2) unencumbered balance, (3) balance of unpaid encumbrances, (4) total expenditures (5) total encumbrances and the (6) balance of cash. This compact record furnishes a detailed index of the status of every appropriation. Your Sundstrand Automatic Tax Billing Machine will not only give you complete budgetary control but it will also keep your revenue records by months, showing the difference between the estimated revenues and actual receipts; prepare your payroll, giving earnings record, and an employee's earnings statement, and other municipal accounting jobs. *Remember it's fully automatic.* Let us give you full particulars.

Underwood Elliott Fisher Accounting Machines are available subject to War Production Board authorization.

UNDERWOOD ELLIOTT FISHER CO.

Manufacturer of the Famous Sundstrand Municipal Accounting Machine

One Park Avenue **New York 16, N. Y.**

Foxboro Appoints District Manager at Tulsa

Wendall A. Melton has been appointed District Manager in charge of the Tulsa territory for The Foxboro Co., Foxboro, Mass., makers of industrial instruments for measurement and control. The offices are in the McBirney Bldg., Tulsa 3, Okla.

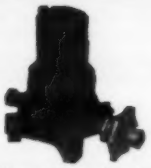
Mr. Melton is well known in industrial circles in Oklahoma. Following his return from France after the first World War, he became a construction and operating engineer serving oil and gas companies and later was a consulting engineer, specializing in oil and gas work. Since 1936 he has been Business Manager for the Board of Education of Tulsa, resigning recently to join the Foxboro organization.

Appointments Made by Busch-Sulzer

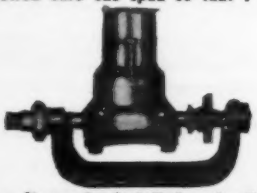
Joseph G. Broz has been appointed Vice-President in Charge of Sales for the Busch-Sulzer Bros.-Diesel Engine Co., St. Louis, Mo. Mr. Broz was formerly Sales Manager of the Diesel Division of the Baldwin Locomotive Works, Philadelphia, Pa., and also Sales Manager and Director of the Baldwin De La Vergne Sales Corp., Philadelphia, Pa.

Announcement was also made of the appointment of Charles E. Beck as Sales Manager. Mr. Beck has been associated with the Sales Department of the organization for the last 26 years.

What has happened to this METER?



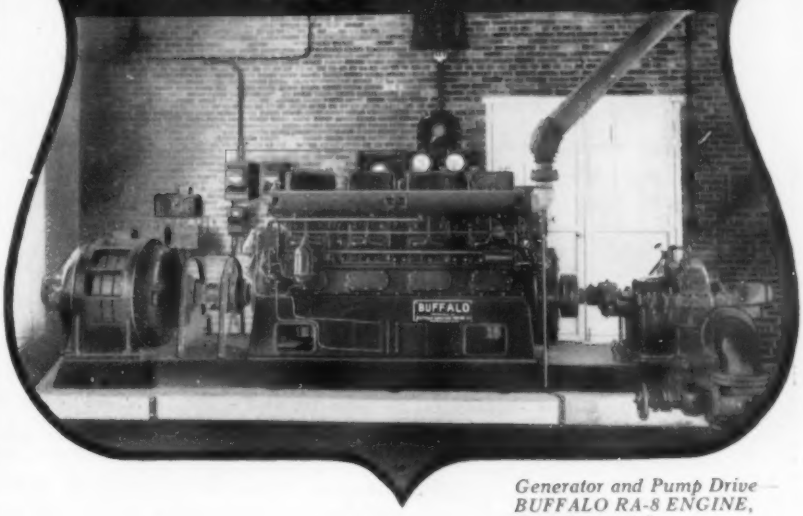
It has had an Expansion Connection screwed onto one spud so that . . .



. . . it can be installed water-tight in any type of Ford Yoke quickly and easily, without disturbing the piping. Hundreds of thousands of Ford Yokes are in service. Send for our catalog describing the many styles of Ford Yokes and other equipment for making better meter settings.

FORD
Meter Box Co.,
WABASH, INDIANA

ASSURANCE OF PROTECTION



Generator and Pump Drive — BUFFALO RA-8 ENGINE, Texarkana, Ark.

A COMMUNITY—or an institution or industrial plant—whose fire protection has been made complete by a Buffalo Engine installation for stand-by pump enjoys a valuable privilege. Its fire insurance rates are less, returning many times the cost of the equipment.

But it is likely that in any community there are too few people who have full understanding of this protection. They are engineers who appreciate their design and construction—or operating men who know by experience the reliable starting and smooth-running, constant speed and uniform power delivery of Buffalo Engines.

The experience of this Company with hundreds of such important installations is available to engineers, public officials and others who are interested in *assurance* of protection. Write for motor specifications for your files or for comparison—or for any other information that interests you.

BUFFALO GASOLENE MOTOR COMPANY

DEPT. AC-25 BUFFALO 13, N. Y., U. S. A.

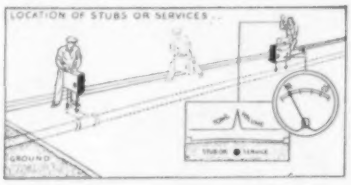
BUFFALO ENGINES
ASSURANCE of PROTECTION

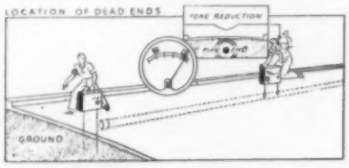
BUFFALO ENGINES — 100 H. P. THROUGH 750 H. P. — IN GENERATOR AND PUMPING SETS FOR WATER WORKS — AIRPORTS — COMMUNICATIONS — FLOOD CONTROL — HOSPITALS — INSTITUTIONS — MINES — MOVABLE BRIDGES — THEATRES — SEWAGE PLANTS.

Buried Pipe and Cable Finder

M-SCOPE

Water Leak Detector





FREE 16-PAGE BOOKLET UPON REQUEST

The M-SCOPE consists of a specially designed radio Transmitter and Receiver, with conductive wire. In operation, the Transmitter sends out a continuous signal, and when there is no metal between Transmitter and Receiver, a definite volume of sound is heard in the Receiver earphones and the meter (mounted on Receiver) gives a definite reading. If a metal object lies between the two units, sound in earphones is louder and meter reading higher—and the pipe or other metal object is located.

An M-SCOPE Water Leak Detector is so "sensitive" that it can spot the exact trouble point even through concrete; so "speedy" that it can test from 275 to 300 hydrants in a single day; so "accurate" that it usually hits the trouble spot "right on the nose" and "always" within a circle two to three feet in diameter.

City Water Superintendents and Army Engineers alike, these days realize the importance of conserving "water, pipe, fuel." The M-SCOPE Water Leak Detector helps you conserve all three.

The M-SCOPE is solving—successfully—the varied problems involved in the development, operation and maintenance of buried pipe and cable systems and is in daily use by representative organizations in such important groups as:

- Government Projects
- Municipalities
- Sewerage and Water Plants
- Consulting Engineers
- Airports
- Public Utilities
- Industrial Plants
- Oil and Pipeline Companies

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FISHER M-SCOPE and LEAK DETECTORS

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PIPE LINE EQUIPMENT

The "Quinn Standard"

FOR CONCRETE PIPE

The Quinn Standard is known as the best the world over, wherever concrete pipe is produced and used. Backed by over 30 years' service in the hands of hundreds of Quinn-educated contractors, municipal departments and pipe manufacturers who know from experience that **Quinn pipe forms** and **Quinn mixing formulas** combine to produce the finest concrete pipe at lowest cost.

Quinn Heavy Duty Pipe Forms

For making pipe by hand methods by either the wet or semi-dry processes. Built to give more years of service—sizes for any diameter pipe from 12 to 84 inches—tongue and groove or bell end pipe—any length.

WRITE TODAY

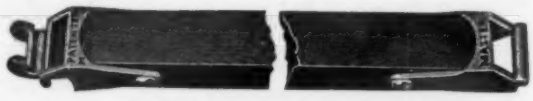
Complete information, prices and estimates sent on request. Also manufacturers of Quinn Concrete Pipe Machines.

QUINN WIRE & IRON WORKS 1623 12th ST. BOONE, IA.

SURE GRIP SEWER RODS and ACCESSORIES

The REGULAR, a light rod, Fir stock 1¼ x 1¼ inch square.

are joined together with a dual lock forming a rigid chain that will float. They can be coupled or uncoupled upon the street if desired. **Made in two sizes.**



The MASTER, a heavy duty rod, Fir stock 1½ x 1½ inch square.

Write for catalog on complete line of sewer cleaning equipment.

EXPANDING SEWER MACHINE CO.

NAPPANEE, IND.

Army-Navy "E" Renewal for Holophane

Employees at the New York headquarters and the Newark, Ohio, plant of the Holophane Co., Inc., have been awarded a renewal of the Army-Navy "E" award. This allows the organization to affix one star to its "E" flag.

S. R. Wlliams

This honor was achieved by continuing their splendid production in such volume as to justify this renewal. In the first instance, it is difficult to win the "Army-Navy "E" and by meriting a renewal, management and employees indicate their determination and ability to supply the equipment necessary for ultimate victory.

The company has also announced that Stuart R. Williams, Manager of the Street Lighting Department, has been elected president of the Central Ohio Chapter of the Ohio Society of Professional Engineers. Mr. Williams is widely known through his association with municipal engineers and brings to the Ohio Society the quality of leadership, supported by an extensive knowledge of engineering endeavors throughout the nation.

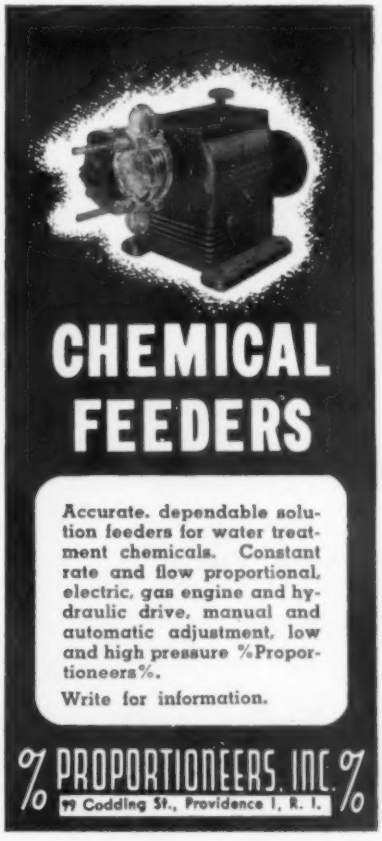
The company points out that Henry L. Logan, engineering consultant for Holophane, continued his lecture series through Canada and the middlewest United States during November and December, speaking in Montreal, Ottawa, Toronto, Milwaukee, Minneapolis, St. Paul, Peoria, Urbana, and Chicago. One of the 12 lectures on lighting delivered in Canada was before the combined Foreman's Club and Industrial Accident Prevention Association Inspectors who manifested a lively interest in his presentation of "Light the Way to Safety." In the United States he has lectured at the University of Illinois in Urbana, and before the Electrical Maintenance Engineers Society in Milwaukee, the Engineers Society in St. Paul, and Illuminating Engineering Society Chapters in Chicago and Milwaukee, as well as Urbana.

Penn Salt Appointment

Ethel Serfas Klingman has been appointed Assistant Manager of Advertising at the Pennsylvania Salt Manufacturing Co., 1000 Widener Bldg., Philadelphia.

Miss Klingman has been with the company for the past seven years, and for the past two years she has been Editor of *Contact*, a company publication.

A BEAUTY!
protect it!
The day your steel storage tank is filled, corrosion starts its destructive work on the inside. By means of the RUSTOP System of cathodic rust control, under-water corrosion can now be banished instantly, completely and permanently . . . from old tanks or new. No draining, sandblasting or painting. No service interruptions . . . no taste. Costs pennies per month to operate. Guaranteed. Write for full information. ELECTRO RUST-PROOFING CORP., Dayton 10, Ohio.
RUSTOP
RUSTOP ELECTRO RUST-PROOFING CORPORATION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Accurate, dependable solution feeders for water treatment chemicals. Constant rate and flow proportional, electric, gas engine and hydraulic drive, manual and automatic adjustment, low and high pressure %Proportioneers%.
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★ ★

Fresh, high quality broom fibres last longer

AFRICAN BASS FIBRES

INDIA PALMYRAH STALKS

The longer mileage you obtain from fresh broom fibres means less time-taking refilling of the broom core and valuable man-hours put to an extra use. The use of fresh, high-quality fibres in your mechanical sweeper is sound economy these days.

We are able to service every need in all types and sizes. We would be happy to receive your request for samples and quotations.

MOUNTAIN HICKORY SPLINTS

STEEL WIRE SWEEPER STALKS

The OTTO GERDAU CO.

82 Wall Street, New York 5, N. Y.

TO GET EXTRA SERVICE FOR THE LONG PULL—*DEMAND*

REEVES ARMY TWILL

"FROM COTTON TO CUTTER"

Fleet operators from coast-to-coast specify *invasion-tested* Reeves Army Twill. Wherever durable, good-looking uniforms are needed, this top-quality fabric tailors smartly and gives superb service. Over 80 million yards of it have already been used to help equip America's fighting men, and it is proving itself under the toughest climatic and combat conditions of global war. This fabric, Sanforized Shrunk* and color-fast to sun, water and perspiration, will meet *your* post-war uniform needs. When the time comes to order them, choose from a wide range of popular colors, for long-lasting good looks insist on Reeves Army Twill.

*Residual shrinkage less than 1%

THE REEVES FABRIC GROUP INCLUDES: *Reeves Army Twill • Glengarrie Poplin • Reeveking Gabardine • Byrd Cloth • Marine Herringbone • Mountain Cloth • Warrior Twill*

SPINNING · WEAVING · DYEING · FINISHING · Reeves FABRICS

Mills Mill, Greenville, S. C. and Woodruff, S. C.
Fairforest Finishing Co., Spartanburg, S. C.

REEVES BROTHERS, INC.

54 WORTH STREET • NEW YORK 13, N. Y.

Representatives in Atlanta • Boston • Chicago • Dallas • Los Angeles • Philadelphia • St. Louis • Montreal • Toronto

Sodium luminaires light railroad crossings so effectively that motorists cannot help but see approaching trains, thus cutting down accidents at railroad crossings.

Use Sodium Lights at All Grade Crossings

The installation of sodium luminaires at twelve grade crossings within the city of Niagara Falls, N. Y., has resulted in an outstanding reduction in night traffic accidents, according to a recent announcement by T. P. Redding, General Superintendent of the Niagara Junction Railway Company. These are furnished by General Electric Co., Schenectady, N. Y.

The company has 38 miles of tracks within the city limits. During four and a half years prior to lighting, night accidents at nine city and four private grade crossings averaged six a year. In spite of doubled train movement this average has dropped to 1.3 a year since the crossings were lighted.

"Our difficulty," said Mr. Redding, "used to be with automobiles running into the side of the train. Motorists had a tendency to ignore the flashlight signals, presumably in the belief no train was approaching. Since the crossings were not illuminated, freight cars preceding the engine were not visible. Now motorists can easily see approaching trains. Our experience with this yellow caution light has been so satisfactory that I would like to see it used universally on highway grade crossings. In fact, I would rather do without the flasher signals than without sodium vapor lights."

Public Relations Director for ARBA

Norman W. Gregg has joined the American Road Builders' Association, Washington, D. C., as Director of Public Relations. Mr. Gregg comes to the association from Advertising Producers' Associated in Chicago where he has been Director of Publicity for three years.

Mr. Gregg was Director of Publicity for Erwin, Wasey & Co., Ltd., Chicago, from 1927 to 1937. During that time he organized the promotion department of "A Century of Progress" while on leave of absence. His former connections included McCutcheon-Gerson Service and Inter-Ocean Syndicate. He has a background of editorial work on Middle Western newspapers, among them The Chicago Tribune and the Chicago Herald & Examiner.

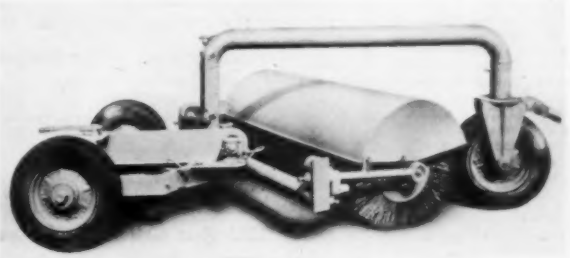
Road Brooms

The new road brooms manufactured by Littleford Brothers, Inc., 500 E. Pearl St., Cincinnati 2, Ohio, are made in two styles, Model 106 and Model 108.

Model 106 is a traction-driven broom with all the power produced from the rear wheels. The Model 108 is a power-driven broom similar to the traction-driven type, yet powered by an engine mounted at the rear.

Littleford road brooms are two-way brooms that can be changed from one sweeping position to the other in two seconds. They also contain the exclusive Littleford features of hydraulic lifting arrangement and Mono-Frame. Both the traction-driven and power-driven brooms can be turned in a small radius due to its three-wheel construction.

A sprinkling system can be added to both models and a blower attachment can be added to the power-driven broom.



Model 106 is Littleford's Traction Driven Broom. All the power is produced from the rear wheels.

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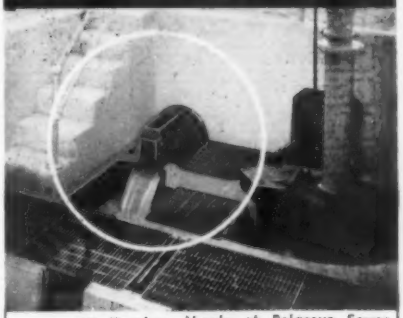


16" Kennison Nozzle at Belgrave Sewer District, Great Neck, Long Island.

BUILDERS Kennison Nozzle

Accurately measures flow of sewage and sludge through partially filled pipes or open channels. Available with Builders instruments for totalizing, rate indicating and recording.

Write for illustrated Bulletin 334A. Address Builders - Providence, Inc., (division of Builders Iron Foundry), 9 Codding St., Providence 1, R. I.

"BLUE PRINT NOW"

Sincerely
BUILDERS - PROVIDENCE

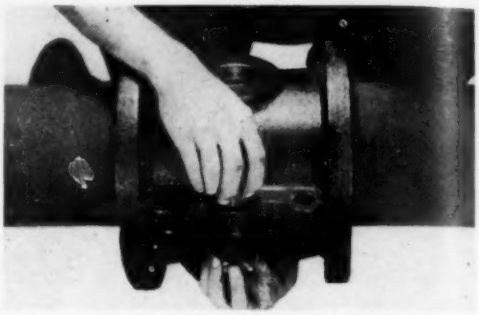
WHICH MAKES SENSE?

THE EASY WAY. MINUTES INSTEAD OF HOURS, TO CLOSE YOUR BIG GATES. SAVE 80% OF MANPOWER AND TIME.

THE DEAN GATE OPERATOR

PAYNE DEAN & CO., LACONIA, N. H.

For QUICK Repairs In Emergencies



Doublex Simplex Repair Sleeves can be installed by one man. A wrench only tool required.

DOUBLEX SIMPLEX SPLIT SLEEVES permit quick, economical, effective repairs of broken pipe. They can be "worth their weight in gold" in cases of unexpected serious repair problems. Moderately priced, so no great investment is necessary to keep several on hand for emergency use. Available for 3" to 36" cast iron pipe. Write our nearest office.

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Birmingham 2, Alabama
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GUNITE

NEW CONSTRUCTION—REPAIRS

PRESTRESSED TANKS	STEEL ENCASEMENTS
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DISINTEGRATED CONCRETE ABUTMENTS RENEWED

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Engineers & Gunite Contractors
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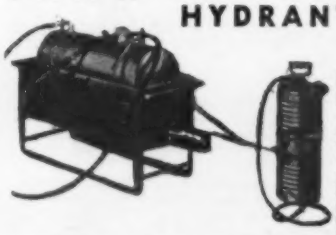
6 Avenue B NEWARK 5, N. J.

THAW CULVERTS AND HYDRANTS WITH AN AEROIL



NO. 98 PORTABLE STEAM THAWER

A handy steam plant with a detachable thawing torch. Used by leading Highway Departments for Culvert Thawing. Special Culvert Nozzle (10 ft.) available. Send for WINTER CATALOG No. 234A including Concrete Heaters, Portable Coil Water Heaters, Thawing Torches, Ground Thawers, etc. For ASPHALT Airport and Road Construction and Maintenance, send for new AEROIL CATALOG NO. 240A—Asphalt Kettles, Cut-back and Emulsion Sprayers, Lead Furnaces, Asphalt Tools, etc.

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1313 East 60th Street, Chicago 37, Illinois

New President for Stewart Iron Works

Stanley M. Stewart was elected President of the Stewart Iron Works Co., Cincinnati 1, Ohio, on January 18.

CARLSON PHOTO
Stanley M. Stewart

Son of Robert S. Stewart, Chairman of the Board, and grandson of the late Richard C. Stewart, founder of this concern, young Mr. Stewart made his way to the top through hard work, careful preparation, and native ability well applied.

From early boyhood and during his youth he worked in the Stewart factory, running errands for the office after school and during summer vacations.

Mr. Stewart went on to attend the University of Pennsylvania where he gained considerable prominence as a football and basketball player besides making high scholastic grades. His school days over, he went to work in a modest capacity in the Stewart plant. Put on his own by an intelligent parent, he moved up through a series of minor positions during the past fifteen years to the presidency of his company.

Selector Cabinet for Airport Runway Lights

Runways at municipal airports are lighted on each side by rows of lights, called contact lights, which protrude only two or three inches above the surface of the ground. The lights need to be visible but not so bright that they will blind the pilot. Therefore, different brightnesses are required for dusk, dark night, and low-visibility conditions. Controls for the lamps provide 5 degrees of light intensity: 100, 30, 10, 3, and 1 percent of full brightness.

In the past the assemblage relays, cutouts, and other switching equipment required to select the desired brightness for the particular one of several runways were quite imposing. In fact, for a large airport the switchboard looked like it might be for a sizable power plant. Now all this contact-light selector equipment for four runways is embodied in the constant-current transformer and in a single selector cabinet—occupying a space of 5 feet by 2 feet wide and 4 feet high.

Furthermore, the new selector cabinet made by Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., is completely assembled and internally wired at the factory and needs only to be uncrated, set in position, and the incoming, outgoing, and control cable connections made. With this unit the operator in the control tower simply presses buttons selecting the desired runway and light intensity and the selector do the rest.

Keep your airports **flexible**
...with modern, dependable
HEIL REFUELERS

. . . and be ready to meet the rapid growth of air traffic . . .

1. SAVE SERVICE TIME
To speed schedules, engineers have increased aircraft cruising speeds 5 to 6 m.p.h. Loss of only one or two minutes at each stop would wipe out the accumulated value of this increased speed.

2. CUT OPERATING COSTS
Pit methods require planes to be taxied to the pits, which is far more expensive than moving a Heil Refuler to the plane.

3. LOWER CAPITAL INVESTMENT
The installation of adequate pit-type facilities for refueling a considerable number of planes means an investment many times that of Heil equipment to handle the same number of planes.

4. FLEXIBILITY
With permanent installations such as pits, it is often difficult and costly to change layouts as required to keep pace with air traffic. Heil Refuelers are flexible and adaptable to your needs. New units can be added at low cost.

5. BIG LOAD CAPACITY
Planes of the DC-3 and DC-4 type, having capacities of 882 and 1700 gals. respectively, will undoubtedly be used. Heil "Trailerized" (frameless) Tanks have been built in capacities to 6000 gals. for a single unit; 10,000 gals. in trains.

With the tremendous growth in air traffic predicted for the years immediately following the war, adequate airport facilities will be an important factor in determining which are the progressive cities.

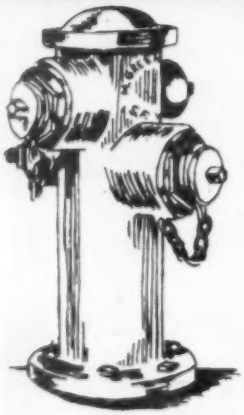
Because permanent installations, such as pits, make it difficult and costly to change layouts as traffic increases, many modern municipalities depend on Heil Refuelers. They're flexible and adaptable — ready to meet varying conditions and increases in refueling demands. As traffic increases, new units can be added at low cost. Heil engineers have added new features for safety, efficiency, extra mobility, and dependable construction that means trouble-free performance.

Look to Heil for continued leadership in this important field.

T-130

THE HEIL CO.
General Offices • MILWAUKEE 1, WISCONSIN

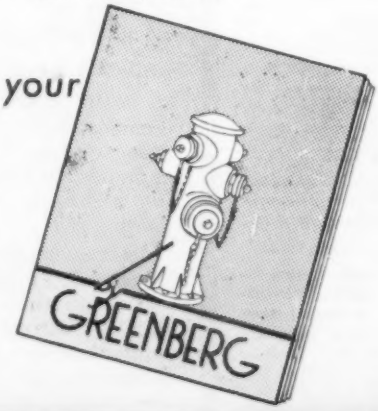
A COMPLETE HYDRANT SERVICE



Originators of the CALIFORNIA type of Hydrant, with INDIVIDUAL, integrally constructed globe type valves on all outlets. We have manufactured and sold this type of Fire Hydrant with its various improvements continuously for over seventy-five years. This is the Fire Fighter's Ideal Hydrant for use in non-freezing climates. Sold through your jobber.

FOR THE COMPLETE
Story of Hydrants for all Climates . . .

Send for your
FREE
COPY OF "HYDRANTS BY GREENBERG"



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Since 1854

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Cast Iron Pipe

PLAIN CAST OR SPUN CENTRIFUGAL

Cast Iron Pipe and Special Castings, Bell and Spigot, Flange, Flexible Joint, Culvert, Milled and Plain End Tubes, Cylinders, Flanged and Bell and Spigot Fittings, High Pressure Fire Service Pipe, Warren Short Body Specials, Threaded End Pipe.

Size 2 to 84-inch

Pipe manufactured in accordance with standard specifications adopted and approved by water works associations and engineers.

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FOR JOINTING CAST-IRON WATER MAINS

Melted and Poured *No Large Bell-holes to Dig*
Saves at Least 75%

Leadite is shipped in powder form, packed in sacks of 100 lbs. net each
Leadite tested and used for over 40 years • Leadite joints improve with age

Be sure it is Leadite and accept no imitations

THE LEADITE COMPANY
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No Caulking

THE COAGULANT
THAT CUTS COSTS

Write today for actual case histories of water plants now using Ferri-Floc.

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Ferri-Floc
FERRIC SULPHATE

TENNESSEE CORPORATION
ATLANTA, GEORGIA LOCKLAND, OHIO

Disconnecting-lowering hangars permit easy servicing of lights. Note that the light here is being serviced while the circuit is turned on.

Simplify Servicing of Lighting Units

Disconnecting-lowering hangars, manufactured by The Thompson Electric Co., 1101 Power Ave., Cleveland 14, Ohio, for use on indoor and outdoor municipal lighting systems, help insure efficient servicing and maintenance.

The use of Thompson hangars permits service and maintenance men to remain on the ground, lower the light fixtures, and clean and relamp the lights regularly and with the least effort since there is no climbing or ladders to carry. The work may be done by inexperienced help and still assure washing and relamping with proper frequency, and in this way reduce maintenance costs and overcome the working hazards otherwise present.

The lights can be serviced while the circuit is on. As soon as the hangar unlatches and disengages, both sides of the electric-circuit are broken, thus guaranteeing complete freedom from shock.

On outdoor installations the chain may be fully enclosed in conduit.

Municipalities Use Chlorine Dioxide Process

The Mathieson Alkali Works, 60 E. 42nd St., New York 17, N. Y., announced recently a list of the cities now using the chlorine dioxide process for the purification of water supplies. These include Niagara Falls, Lackawanna, North Tonawanda and Tonawanda, N. Y.; Lockport, Pa.; Bangor, Me.; and Greenwood, S. C.

This process, recently described at a meeting of the American Chemical Society, consists of chlorination to destroy bacteria, followed by treatment with chlorine dioxide to remove tastes and odors. It was developed at Niagara Falls to solve the problem of unpalatable water resulting from contamination by industrial wastes and algae.

Pacific Car Corp. Buys Kenworth Motor Truck

Pacific Car and Foundry Co. of Seattle and Renton, Wash., has acquired the controlling interest in the Kenworth Motor Truck Corp., Seattle, according to a recent announcement by Paul Pigott, President of Pacific Car and Foundry.

The announcement pointed out that no changes are planned for the duration in the operation of the Kenworth Motor Truck Corp. since both organizations will devote their efforts exclusively to war orders. After the war the combined organizations and their facilities will be devoted to the developing of highway and city passenger-carrying motor coaches, logging trucks, oil country vehicles, and heavy duty contractors' trucks.

DON'T FIGHT FROZEN HYDRANTS

Frozen hydrants are a thing of the past if your installations are Mueller-Columbian because there can be no water remain in the hydrant barrel to freeze. Large double drain valves operate positively with the action of the main valve. There are no springs, plungers, toggle joints or synchronized mechanisms of any kind to get out of order. Don't let frozen hydrants handicap you. Insist upon Mueller-Columbians.

MUELLER CO.
CHATTANOOGA, TENN.

over 90 years of progressive storage tank engineering!

Established in 1854, the R. D. Cole Mfg. Co. has long been recognized as one of the nation's outstanding tank builders. With over 90 years of "progressive storage tank experience" at your disposal, we shall welcome the opportunity to serve your tank needs.

All shapes and sizes

We have developed a complete line of elevated steel tanks for water supply, both for domestic service, and sprinkler requirements, ranging in capacity from 5,000 to 2,000,000 gallons. The designs include the standard Hemi-spherical and Self-supporting bottom, the "Cole Ovaloid," Standpipe, and many individual styles.

Storage Tanks

We also make pressure tanks for storage of gas from digestors at sewage disposal plants so that excess output at peak loads can be used during off-peak periods. Also chemical storage tanks, hot water storage tanks, tanks for bulk storage of oils and gas.

Write for "Tank Talk—No. 15A

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Established in 1854
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THIS WINTER, MORE THAN EVER, POSITIVE SKID PROTECTION IS VITAL

ROLLING WHEELS speed workers and raw materials to factories, finished parts to assembly points and implements of war to the armed forces. They must not skid on icy turns nor stall on slippery hills.

Give 'em traction, keep 'em rolling all winter by effective ice control, with abrasives that dig in and hold. Sand or cinders treated with calcium chloride dig into the ice — fast. Such treated abrasives do not freeze in stock piles, are ready for instant spreading. They go three times as far — stay on the ice many times longer — combine highest efficiency with greatest economy.

Calcium chloride, the active agent which gives abrasives their ability to bite and hold steady, also gives them their fast action even at coldest temperatures.

Write today for Bulletin No. 27, "Skid-proofing Icy Roads and Streets." 36 pages give you data on ice control methods, materials and equipment. Get your copy now.

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ROBERT W. FLACK
Charlotte, N. C.

These are the City Managers of all but two of the 23 American cities of over 100,000 population having the commission-manager form of government. The missing portraits—not received in time for this issue—are those of City Managers C. F. Aurand, of Oklahoma City, and George T. Gundry, of Flint, Michigan.

...WAR JOBS THROUGH PUBLIC WORKS—See pages 5 and 106 of this issue